

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TENNESSEE
WESTERN DIVISION**

CITY OF MEMPHIS,

Plaintiff,

v.

Case No. 2:19-cv-2864-MSN-cgc

HORN LAKE CREEK BASIN INTERCEPTOR
SEWER DISTRICT and
DESOTO COUNTY, MISSISSIPPI,

Defendants.

MEMORANDUM OPINION AND ORDER

At issue is sewage. At stake is the environment; particularly natural resources—both ground and surface waters—from the Mississippi River to the Memphis Sand Aquifer. In the balance hangs the quality of life in two adjacent communities, across state lines, and the ability of local governments to provide an essential service while maintaining the infrastructure to do so. The complexity of legal and environmental issues at hand, the local, state, and federal jurisdictions involved, and the extensive history of this case, call for equitable, as well as legal, relief.

I. BACKGROUND

The dispute in this matter arises out of a series of contracts, (*see* ECF No. 110 at PageID 1188–90, 1193–95), but primarily two agreements: (1) the Sewage Treatment Agreement dated February 6, 1975, between the City of Memphis (“City” or “Memphis”), the Horn Lake Creek Basin Interceptor Sewer District of DeSoto County, Mississippi (“District”), and DeSoto County, Mississippi (“DeSoto County”) (“1975 Agreement”), and (2) the Supplemental Agreement dated September 22, 1983 between the same parties (“1983 Agreement,” and collectively,

“Agreements”). The Agreements provide that the City will treat wastewater collected by the District in exchange for fee payments based on the volume of wastewater delivered. (ECF No. 116 at PageID 1254.)

The District is a public entity created by the State of Mississippi to collect wastewater, and it primarily serves the cities of Southaven, Mississippi (“Southaven”) and Horn Lake, Mississippi (“Horn Lake”). Parts of Southaven and Horn Lake are in the Horn Lake Creek Drainage Basin (“Basin”), which is a geological feature where water drains north via gravity from DeSoto County, Mississippi into Shelby County, Tennessee. (ECF No. 116 at PageID 116.) This natural gravitational flow was one of the factors that lead the parties to enter into the Agreements, as it allowed the parties to construct sewer lines that used gravitational flow to deliver wastewater from the District to the City. (*See* ECF No. 1-6 at PageID 24.)

On March 28, 2018, the City’s Director of Public Works, Robert Knecht, sent a letter to the District, informing it that “Memphis will no longer extend wastewater treatment services to the District upon expiration of the [Agreements] which will occur on September 22, 2023.” (ECF No. 116 at PageID 1254.) The letter also requested the District develop and submit a “detailed plan of action for the removal of its users from [the City’s] sanitary sewer system along with a proposed schedule within the next six (6) months” (ECF No. 116 at PageID 1254.) The District did not submit the requested plan within six months. (*Id.* at PageID 1255.)

Mr. Knecht’s letter began a series of discussions and negotiations between the parties; the District did not believe the Agreements expired on September 22, 2023 or that the City had the right to unilaterally terminate the Agreements. (*See* ECF No. 41-5 at PageID 229.) In August 2018, the City’s Mayor, Jim Strickland, met with the mayors of Southaven and Horn Lake to discuss the sewer services provided to Southaven and Horn Lake. (ECF No. 116 at PageID 1255.)

A few months later, in October 2018, Mayor Strickland sent a follow-up letter to the mayors of Southaven and Horn Lake, telling them that the City would not reconsider its position to terminate sewer services, but it “might be willing to make reasonable allowances to conditionally extend the termination date should the engineering, design, and construction required to complete the removal of the District’s users not be feasible by September 2023.” (*Id.*)

The parties continued to negotiate off-and-on throughout 2019. A meeting between the parties’ attorneys ended without resolution on December 11, 2019, and six days later, the City filed its Complaint for Declaratory Judgment in this matter. Three days after that, the District and DeSoto County filed their own Complaint in the Northern District of Mississippi, which was later transferred to this Court. (*See* Case No. 2:20-cv-2641, “Related Case.”)

On August 16, 2021, the City filed a motion for summary judgment, which sought a declaration that the Agreements’ term ended on September 22, 2023, and the City had no obligation and could not be compelled to provide wastewater treatments services to the District after that date. (*See* ECF No. 90.) Even after the City’s summary judgment motion was filed, however, it appeared the parties continued at least some limited negotiations, (*see* ECF No. 110 at PageID 1196–97), and at a status conference held in April 2022, the parties agreed to participate in another round of mediation. That mediation was ultimately unsuccessful, and the parties filed a notice on September 28, 2022, informing the Court that further mediation would not assist in resolving the matter. (*See* ECF No. 100.)

About 10 days before trial was set to begin, the Court entered an order partially granting the City’s motion for summary judgment. (*See* ECF No. 110.) As explained in the order, the Court found that the unambiguous language of the Agreements stated that the parties’ intent was for the Agreements to end on September 22, 2023; the Court, however, denied the City’s request

for a declaration that it could also not be compelled to continue treating the District's wastewater after September 22, 2023. (*See id.* at PageID 1221–23.)

With the primary issue of the Agreements' termination date resolved, the parties agreed that the remaining questions for trial were "time and money." Trial took place over five days in April and May, 2023. After, each party submitted its proposed findings of fact and conclusions of law. (*See* ECF Nos. 146 & 147.)

II. ISSUES FOR TRIAL

Prior to trial, the parties agreed that the two issues to be resolved at trial were as follows:

First, the time necessary for the District to disconnect from the City's wastewater treatment system. (ECF No. 116 at PageID 1256.) Or, in other words, "how long it would reasonably take the District to fund, design, permit, and construct a new or expanded wastewater treatment facility, piping, pumps and storage facilities to allow it to disconnect from the Memphis system." (*Id.*)

Second, the rate that the District should pay to the City for wastewater services after the Agreements end. (*Id.*) The City contended that the District should pay \$3.32 per 1,000 gallons, while the District asserted that it should continue to pay the rate as calculated under the Agreements' formula. (*Id.*)

During trial, three additional issues emerged. First, whether the Court should temporarily enjoin all new sewer connections within the District until the District begins operation of a peak flow storage facility. Second, whether the Court should permanently enjoin the District from accepting additional flows from industrial users; in other words, order that volume of flows from the District's industrial users remain at or below the average daily volume as of September 22, 2023. Third, whether the Court should order the City and the District to enter into an agreement that satisfies the Inter-Jurisdictional Agreement Program ("IJA Program" or "IJAP") that was

established under the Consent Decree in Case No. 2:10-cv-02083-SHM-dkv.¹ (*See* Case No. 2:10-cv-02083-SHM-dkv, ECF No. 30-1.)

III. PROOF AT TRIAL

The City called five witnesses at trial: (1) Scott Morgan; (2) Bradley Davis; (3) Gary D. Shambaugh; (4) Richard Michelfelder; and (5) Robert Knecht. The District called six witnesses at trial: (1) Daniel Jackson; (2) Tim Verner; (3) Darren Musselwhite; (4) W. Terry Mitchell; (5) Tracy Huffman; and (6) Nicholas Schorr. The parties also read deposition testimony from the depositions of: (1) Charles Mason Davis²; (2) Tim Verner³; and (3) Robert Knecht.⁴

Scott Morgan is a senior environmental administrator for the City. (ECF No. 136 at PageID 1834.) He has a degree in geological engineering and has worked for the City a little over 17 years. (*Id.*)

Bradley Davis is an engineer licensed in Tennessee, Arkansas, and Mississippi. (ECF No. 135 at PageID 1712.) He received his bachelor's and master's degrees in civil engineering from the University of Memphis. (*Id.*) He has 24-25 years of experience in the wastewater industry; he has worked for consulting firms and the City. (*Id.* at PageID 1711.) His experience includes work on two wastewater treatment facilities. The first was for the city of Collierville, Tennessee, which

¹ At the Court's request, the parties submitted briefs regarding the Consent Decree and Inter-Jurisdictional Agreement Program. (*See* ECF Nos. 126 & 127.)

² Deposition of Charles Mason Davis taken March 26, 2021, page 40, lines 6–11. (*See* ECF No. 138 at PageID 2190–91.)

³ Rule 30(b)(6) Deposition of Tim Verner taken March 25, 2021, page 79, line 21 to page 80, line 8; page 82, lines 1–9; page 90, line 11 to page 92, line 13; page 94, lines 3–5. (*See* ECF No. 138 at PageID 2191–96.)

⁴ Deposition of Robert Knecht taken June 17, 2021, page 25, line 12; page 27, lines 4–5; page 28, line 5; page 30, line 8; page 39, line 7; page 40, line 15; page 44, line 12. (*See* ECF No. 138 at PageID 2198–209.)

was an expansion done on an existing plant that remained in operation during the expansion process; the second was a new facility at Meeman-Shelby Forest State Park (“Shelby Forest”) in Millington, Tennessee, which involved design and permitting for a new facility. (*Id.* at PageID 1713.)

Gary Shambaugh testified as an expert witness under Federal Rule of Evidence 702 for his specialized knowledge in rate design and cost of service determinations. (ECF No. 137 at PageID 1898–99.) He is the managing principal of Shambaugh Utility Consulting, LLC, which provides a variety of services to utilities across the country, including financial analysis, calculation of rates, cost of service, depreciation, and regulated rate filings. (*Id.* at PageID 1893.) Previously, Mr. Shambaugh worked for AUS Consultants for 44 years; he retired from AUS Consultants as an executive vice president and managing principal of the revenue requirements and cost of service division. (*Id.* at PageID 1896–97.) In total, Mr. Shambaugh has done cost of service studies for 30 to 35 years. (*Id.* at PageID 1897.)

Richard Michelfelder testified as an expert witness under Federal Rule of Evidence 702 for his specialized knowledge in risk premium and cost of service studies. (ECF No. 137 at PageID 1955.) He has a bachelor’s degree in economics from Holy Family University in Philadelphia, Pennsylvania, a master’s degree and Ph. D. in economics and finance from Fordham University in New York City, New York. (*Id.* at PageID 1949.) He is an associate professor of professional practice finance at Rutgers University, and has been a consultant to the electricity, natural gas, water, wastewater, and sewer industries since 1986. (*Id.*) He has provided risk premium analysis and consulting services to consulting firms, software firms, utilities, and nuclear power plants, and he developed his own theoretical model that has been published in four or five academic journals. (*Id.* at PageID 1953–54; *see* Exhibit 20.)

Robert Knecht is the City's Director of Public Works and the Utility Director; he manages two of the City's enterprise funds: the Sewer Fund and the Storm Water Fund. (ECF No. 141 at PageID 2283–84.) He has a Bachelor of Science in civil engineering from the University of Memphis, with a concentration in hydraulics, hydrology, and advanced wastewater treatment, and a minor in mathematics, chemistry, and microbiology. (*Id.* at PageID 2282.) He also has a master's in business administration. (*Id.* at PageID 2282–83.) He has served as Director of Public Works for approximately 10 years and served as Deputy Director for approximately five years prior to that. (*Id.*) He began working for the City 21 years ago as a maintenance engineer for Public Works in drain maintenance. (*Id.*)

Charles Mason Davis is the former Chair of the District's Board of Commissioners. (ECF No. 138 at PageID 2188–89.) He was designated to testify on behalf of the District under Federal Rule of Civil Procedure 30(b)(6). (*Id.* at PageID 2187–88.) His deposition was taken in this matter on March 26, 2021. (*Id.* at PageID 2188.)

Tim Verner testified as an expert witness under Federal Rule of Evidence 702 for his specialized knowledge on the design and construction of wastewater treatment facilities and the time it would take the District to design and construct a wastewater treatment facility. (ECF No. 137 at PageID 2008–11.) He also testified as a fact witness. (*Id.* at PageID 2011.) He is currently a senior vice president with Fisher and Arnold and has been the District's consulting engineer since 1989. (*Id.* at PageID 2005–06.) He earned his bachelor's degree in civil engineering from Christian Brothers College, now Christian Brothers University, in 1984. (*Id.* at PageID 2005.)

Daniel Jackson is a professional engineer and Senior Vice President at RJN Group, an engineering firm specializing in water collection systems. (ECF No. 135 at PageID 1770–71.) He earned a Bachelor of Science in civil engineering from Texas Tech University in 2002 and has

been licensed in Texas and Arkansas since 2008. (*Id.*) He has worked at RJN Group for 20 years and completed close to 100 inflow and infiltration (“I&I”) abatement studies and approximately 30 hydraulic modeling master plan projects. (*Id.* at PageID 1770–72.)

Darren Musselwhite is the mayor of Southaven, Mississippi; he has served as mayor since June 28, 2013. (ECF No. 138 at PageID 2118.) Mayor Musselwhite graduated from the University of Mississippi (“Ole Miss”) with his bachelor’s degree in managerial finance. (*Id.* at PageID 2118–19.) He opened an insurance agency in 1992, which he continues to own while serving as mayor, but being the mayor of Southaven is a full-time job. (*Id.*)

Wyatt Terry Mitchell testified as an expert witness under Federal Rule of Evidence 702 for his specialized knowledge in water sewer rates, cost of service studies, and utility accounting. (ECF No. 138 at PageID 2144; Exhibit 30.) He graduated from Auburn University in 1973 with his bachelor’s degree in business with a concentration in management and accounting and is a certified public accountant (“CPA”). (ECF No. 138 at PageID 2140–41; Exhibit 30.) He received a certification as a utility rate making specialist from the University of South Alabama, and later received a certification in advanced pricing for utilities from the University of South Alabama. (ECF No. 138 at PageID 2141; Exhibit 30.) He has worked in the utility rate industry for over 49 years and has prepared more than 50 cost of service studies, although none of those studies involved a utility with a customer or customers in another state. (ECF No. 138 at PageID 2141–42, 2167; Exhibit 30.)

Tracy Huffman works for Wagner Engineering, who represents the DeSoto County Regional Utility Authority (“DCRUA”), and he serves as the lead engineer for DCRUA. (ECF No. 141 at PageID 2354.) He has worked at Wagner Engineering for approximately 24 years and

served as DCRUA's lead engineer for 21 years. (*Id.*) He graduated from Mississippi State University in 1993 with his Bachelor of Science in civil engineering. (*Id.* at PageID 2353.)

Nicholas Schorr testified as an expert witness under Federal Rule of Evidence 702 for his specialized knowledge in municipal bond financing. (ECF No. 141 at PageID 2394–95.) He earned his undergraduate degree in accounting from Southeastern Louisiana University and his master's degree in accounting from the University of North Carolina. (*Id.* at PageID 2392; Exhibit 35.) He works at Government Consultants and has worked there for seven years. (ECF No. 141 at PageID 2392.) He has his Series 50 and Series 54 licenses through the Financial Industry Regulatory Agency ("FINRA"). (*Id.* at PageID 2392–94; Exhibit 35.) At Government Consultants, he serves as an advisor to municipal governments, providing advice related to debt transactions. (ECF No. 141 at PageID 2392–93; Exhibit 35.) He has worked on approximately 180 bond projects totaling around \$1.4 billion during his time at Government Consultants. (ECF No. 141 at PageID 2394; Exhibit 35.)

IV. STIPULATED FACTS

The parties stipulated and agreed to the following facts, which the Court adopts and makes part of its findings of fact pursuant to Federal Rule of Civil Procedure 52:

1. Memphis Light, Gas and Water ("MLGW") is a municipal utility of the City that is operated as an independent division of the City's government. (ECF No. 144 at PageID 2447.)
2. MLGW is required to operate as a self-sufficient entity under Tennessee law. *See* Tenn. Code Ann. § 7-34-115(a)(1). (ECF No. 144 at PageID 2447.)
3. MLGW cannot serve as a source of revenue for the City. *See* Tenn. Code Ann. § 7-34-115(a)(1). Instead, it is required to "operate for the use and benefit of the consumers served by such public works and for the improvement of the health and safety of the inhabitants of the

area served.” *Id.* This is commonly referred to as an “enterprise fund.” As an enterprise fund, MLGW is required to charge its customers, including other divisions of the City’s government, sufficient rates and fees to ensure that it is able to support the continued operation of its utility systems and to maintain adequate cash reserves. (ECF No. 144 at PageID 2448.)

4. The City, through the Public Works Division, provides sanitary sewer conveyance, treatment, and disposal services to the Town of Collierville, Tennessee (“Collierville”), the City of Lakeland, Tennessee (“Lakeland”), and the City of Millington, Tennessee (“Millington”). (ECF No. 144 at PageID 2448.) The City’s Public Works Division does not directly bill the individual residents of Collierville, Lakeland, or Millington for these services. (*Id.*)

5. Collierville provides its own sewer billing and collection services, and MLGW provides sewer billing and collection services to the residents of Lakeland and Millington. For customers located in Lakeland and Millington, the sewer service charge appears on each customer’s monthly MLGW bill. MLGW then reports to the City by the 8th day of the succeeding month the total monthly billings for sewer service charges. (ECF No. 144 at PageID 2448.)

6. MLGW deducts a flat amount, adjusted annually by the prior year’s Consumer Price Index, from its collections to reflect the cost of billing and collection of the City’s sewer service charge. The flat rate equals approximately one percent (1%) of the sewer fees MLGW collects on behalf of the City’s Public Works Division. (ECF No. 144 at PageID 2448.)

7. MLGW’s sewer fee collections for Lakeland currently average about \$23,000 per month. Thus, the City’s Public Works Division pays MLGW approximately \$230 per month to bill Lakeland for sewer services. Collections for Millington currently average about \$5,000 per month, and thus, the City’s Public Works Division pays MLGW approximately \$50 per month to bill Millington for sewer services. (ECF No. 144 at PageID 2448–49.)

8. The City's sewer fee collections for the District currently average approximately \$240,000 per month. (ECF No. 144 at PageID 2449.)

9. Collierville performs its own billing services and pays the City the same sewer rates as Lakeland and Millington. (ECF No. 144 at PageID 2449.)

10. The District may annually apply for low interest loans from the Mississippi State Revolving Fund ("SRF"), which is administered by the Mississippi Department of Environmental Quality ("MDEQ"). (ECF No. 128 at PageID 1644.)

11. MDEQ annually publishes a Water Pollution Control Revolving Loan Fund Funds Availability Notification. (ECF No. 128 at PageID 1644.)

12. The SRF program includes both low-interest loans and a limited amount of subsidy funding each year. (ECF No. 128 at PageID 1644.)

13. The amount available for loans from the SRF program varies widely from year to year. For example, in 2019 MDEQ provided loans for five projects totaling \$16,872,460.20, but in 2020, MDEQ funded loans for five projects totaling \$46,631,425.83. (ECF No. 128 at PageID 1645.)

14. For Fiscal Year 2023, MDEQ anticipates more than \$150 million in loan funds will be available with interest rates at "historic lows" of 0.8% for new 20-year term loans and 1.8% for new 30-year term loans. (ECF No. 128 at PageID 1644.)

15. MDEQ also estimates that the total amount of subsidy funding available for FY 2023 will be in "in excess of \$35 million" statewide. (ECF No. 128 at PageID 1644–45.)

16. For a project of the size and scope of a new wastewater treatment facility sufficient to treat the District's wastewater, multiple annual rounds of SRF funding would be necessary given the limited amounts available on a yearly basis. (ECF No. 128 at PageID 1645.)

17. The District may lobby the Mississippi State Legislature for direct state funding. This process is inherently uncertain and may require several years of lobbying during legislative sessions to obtain the necessary funding. (ECF No. 128 at PageID 1645.)

18. The District may lobby for available funds in the Mississippi Environmental Infrastructure and Resource Protection and Development Program authorized by Section 592 of the Water Resources Development Act (“WRDA”) of 1999 (“Section 592 Program”). The U.S. Army Corps of Engineers administers the Section 592 Program, and its funding is intended for water related environmental infrastructure within Mississippi, including wastewater treatment facilities. Money is distributed in the form of grants. The program, however, is not automatically funded on an annual basis; instead, Congress must make funds available. In addition, Section 592 Program funds would represent only a small percentage of the total cost of constructing the necessary wastewater facilities for the District. (ECF No. 128 at PageID 1645.)

19. Mississippi has remaining federal funds to disburse under the American Rescue Plan Act of 2021 (“ARPA”). Some of these funds are expected to be allocated to MDEQ, and the District intends to apply for an appropriation to assist with the construction of wastewater facilities when the process for doing so is announced. (ECF No. 128 at PageID 1646.)

20. The District may apply for low-interest federal loan funding under the Water Infrastructure Finance and Innovation Act (“WIFIA”). The EPA administers the WIFIA program, under which a total of 103 loans nationwide have been closed.⁵

21. The WIFIA loan application process has two phases. First, the EPA publishes a Notice of Funding Availability (“NOFA”) in which it announces the amount of funding available and solicits Letters of Interest (“LOIs”) from prospective borrowers. The LOI provides

⁵ As of May 25, 2023. (ECF No. 128 at PageID 1646.)

information that the EPA uses to evaluate a project's eligibility for a WIFIA loan. After reviewing the LOIs, the EPA selects projects it intends to fund and invites those prospective borrowers to apply for a WIFIA loan. Second, the invitee applies for a WIFIA loan, and the parties negotiate terms and seek final approval from the EPA Administrator. (ECF No. 128 at PageID 1646–47.)

22. The EPA accepts LOIs for WIFIA loans throughout the year, beginning on the date listed in the NOFA until all allocated funding has been committed or a subsequent NOFA superseding the present one has been published, whichever comes first. (ECF No. 128 at PageID 1646.)

23. Not all prospective borrowers who submit LOIs are invited to apply for a final WIFIA loan, and not all those invited to apply for a loan ultimately receive funding. (ECF No. 128 at PageID 1647.)

24. WIFIA loans are limited to 49% of eligible project costs. (ECF No. 128 at PageID 1646.)

25. Since the WIFIA program began in 2018, no project in Mississippi has received a WIFIA loan even though LOIs for Mississippi projects have been submitted. (ECF No. 128 at PageID 1646–47.)

26. There are no viable temporary or portable wastewater treatments that could be used to treat the District's wastewater while it constructs new treatment facilities. (ECF No. 129 at PageID 1649–50.)

27. If the City refuses to accept the District's wastewater and terminates the Horn Lake Interceptor somewhere on the Mississippi side of the border before an alternative wastewater facility is operational, the District's wastewater would flood and backflow through the District's sewer pipes, eventually overflowing onto the ground. This uncontrolled release of raw sewage

would violate Section 301 of the Clean Water Act (33 U.S.C. § 1311) because the sewage would inevitably flow into nearby waterways, including the Mississippi River. (ECF No. 145-1 at PageID 2455–56.)

28. An uncontrolled release of raw sewage from the District’s sewer pipes could cause large scale fish and aquatic species kills in surface waters in Mississippi and Tennessee. (ECF No. 145-1 at PageID 2456.)

29. An uncontrolled release of raw sewage from the District’s pipes would adversely impact portions of the District’s surficial soils and could potentially adversely impact part of Tennessee’s surficial soils. (ECF No. 145-1 at PageID 2456.)

30. Constant discharge of large volumes of sewage from the District’s pipes may impact and degrade the quality of groundwater within the Mississippi River Valley Alluvial Aquifer.⁶ (ECF No. 145-1 at PageID 2457.)

31. Due to unique geological features, the Memphis Sand Aquifer⁷ has a low risk of contamination from an uncontrolled release of raw sewage from the District’s sewer pipes. (ECF No. 145-1 at PageID 2457–58.)

32. An unabated, extended discharge of untreated sewage from the District’s pipes could result in a major environmental event due to the volume of sewage the District collects and the geography of the Horn Lake Creek Basin. (ECF No. 145-1 at PageID 2458.)

⁶ The Mississippi River Valley Alluvial Aquifer is an upper groundwater unit that is not used to the same extent as the Memphis Sands Aquifer, but it has some shallow wells in use. (ECF No. 145-1 at PageID 2457.)

⁷ Also known as the Memphis Sands Aquifer, the Memphis Aquifer, or the Sparta Aquifer; it is part of the Middle Claiborne Aquifer.

V. FINDINGS OF FACT

In addition to the Stipulated Facts above, the Court makes additional findings of fact pursuant to Federal Rule of Civil Procedure 52 as set forth below.⁸

A. Factual and Procedural History

1. The City owns and operates two wastewater treatment plants: the T.E. Maxson plant (“Maxson Plant”) and the M.C. Stiles plant (“Stiles Plant”). The City began planning for the construction of the plants in the 1960s. (*See* ECF No. 110 at PageID 1187–88.) The Maxson Plant began operations in 1975, (ECF No. 110 at PageID 1194), and the Stiles Plant began operations in 1977 (ECF No. 135 at PageID 1666).

2. On February 6, 1975, the City, the District, and DeSoto County entered into a sewage treatment agreement (“1975 Agreement”). (*See* ECF No. 110 at PageID 1193; ECF No. 116 at PageID 1254.)

3. The Memphis City Council approved and ratified the 1975 Agreement via resolutions on March 4, 1975. (*See* ECF No. 90-21 at PageID 724.)

4. The 1975 Agreement provides that the District’s wastewater is transported from the Mississippi state line to the Maxson Plant via a pipeline known as the “Horn Lake Interceptor.” The City was responsible for the construction of the portion of the Horn Lake Interceptor in Shelby County, Tennessee, and it remains responsible for its operation and maintenance. The District was responsible for the construction of the portion of the Horn Lake Interceptor in DeSoto County, Mississippi, and it remains responsible for its operation and maintenance. (ECF No. 116 at PageID 1254.)

⁸ Not all testimony or evidence may be referenced; however, the Court has examined all submitted materials, weighed the credibility of witnesses, considered all admitted evidence, and reviewed the entire record in the case.

5. Prior to entering into the 1975 Agreement, the District considered one other option for the treatment of its wastewater: construction of a wastewater treatment plant in Mississippi that would discharge into Horn Lake Creek. (ECF No. 137 at PageID 2018–20; Exhibit 23.) A memorandum from Baker Engineers dated August 17, 1971, indicates that, at the time, they believed building a wastewater treatment plant in Mississippi was “considerably more economical,” than transporting the wastewater to Memphis for treatment, and the engineering firm would begin the process for such a plant. (See Exhibit 23.) The economics, however, subsequently shifted. By 1972, engineers had learned that plans for a Mississippi wastewater treatment plant needed “to include the construction of a physical-chemical treatment system with post aeration” due to Tennessee’s “high effluent quality standards,” which significantly increased construction costs. (Exhibit 23 at District-000119; ECF No. 137 at PageID 2020–25.) As a result, the option to transport the District’s wastewater to the City’s Maxson Plant for treatment became the option that required “the least capital expenditure in terms of capital and operating costs.” (*Id.*)

6. After the economics of the two options were settled, a new potential roadblock arose in April 1973: Tennessee would be unable to construct its portion of the Horn Lake Interceptor to the Mississippi state line for at least two more years, and therefore, the District likely needed to “abandon the idea of transporting [wastewater] to the City of Memphis for treatment as originally planned.” (ECF No. 137 at PageID 2026–27; Exhibit 25.) The funding issue was apparently resolved after the State of Mississippi offered to transfer certain federal funding it had received to the State of Tennessee, contingent on Tennessee making additional funds available for the interceptor project. Three letters dated December 11, 1973, January 31, 1974, and February 21, 1974, between Glen Wood, Jr. Executive Director of Mississippi’s Air & Water Pollution Control Commission, and S. Leary Jones, Director of the Division of Water Quality Control for

Tennessee’s Department of Public Health, reflect that Mississippi offered Tennessee \$5.7 million, which the EPA had allocated to Mississippi, to partially finance construction of the Horn Lake Interceptor in Tennessee. (ECF No. 137 at PageID 2027—34; Exhibit 26 (collective).) The \$5.7 million was the estimated amount of a grant Mississippi had received “to provide biological treatment and pump the effluent to the Mississippi River.” (*Id.*) The offer from Mississippi was contingent on Tennessee committing “to make additional funds available from its current allotment of FY-73 or FY-74 funds” within 60 days of Glen Wood’s December 11, 1973 letter. (*Id.*) The record does not reflect, however, how much money was ultimately transferred from Mississippi to Tennessee.

7. On September 22, 1983, the City, the District, and DeSoto County entered into a supplemental agreement (“1983 Agreement”) to address industrial dischargers located in the District. (*See* ECF No. 110 at PageID 1193; Exhibit 22; ECF No. 116 at PageID 1254; the 1975 Agreement and 1983 Agreement are collectively referred to as the “Agreements.”)

8. The capacity of the Horn Lake Interceptor located in Tennessee was designed for 54 percent use by the District and 46 percent use by the City, and the District paid for 54 percent of the cost to construct the Horn Lake Creek Interceptor located in Tennessee. (ECF No. 135 at PageID 1697.)

9. Once the District disconnects from the City’s wastewater system, the District will not be able to use the Horn Lake Interceptor located in Tennessee, but the interceptor will continue to be used by portions of Memphis and unincorporated Shelby County. (ECF No. 135 at PageID 1697; *see* ECF No. 137 at PageID 2052–55; Exhibit 28.)

10. This Court previously granted partial summary judgment in favor of the City, finding that the 1975 Agreement, as extended by the 1983 Agreement, ends by its own terms on September 22, 2023. (ECF No. 110 at PageID 1221.)

11. Prior to this Court's ruling on the City's summary judgment motion, the District had decided it was in its best interest to disconnect from Memphis' wastewater system. (ECF No. 137 at PageID 2107.)

12. The 1975 Agreement provides an initial volumetric rate for treatment of the District's wastewater, which was "subject to review and adjustment after 12 months operation and annually thereafter to reflect the actual cost to the City of treating and disposing of the wastewater from the District." (*See* ECF No. 1-6 at PageID 23.)

13. The 1975 Agreement provides that "the following items will be considered in making adjustments" to the District's volumetric rate: "A. Cost of operation and of the interceptor sewer line and treatment plant"; "B. Actual cost of constructing the line and plant"; and "C. Grants-in-aid-of-construction not repayable." (*See* ECF No. 1-6 at PageID 23.)

14. The 1975 Agreement provides that "construction and operation costs shall be allocated between the City and the District proportionately according to the use by each . . . based on average flow and wastewater characteristics." (*See* ECF No. 1-6 at PageID 23.)

15. The 1975 Agreement further provides that the "rate shall be reviewed annually and adjusted to reflect the actual cost of providing the service. It is the intention of the parties that the City provide the service at its actual cost and the rates will reflect this intention." (*See* ECF No. 1-6 at PageID 23.)

16. The 1983 Agreement provides that "[a]ll industries served by the District whose wastes are greater in strength than the concentration values established as representative of normal

sewage or wastewater will be charged Additional Treatment Costs equal to those charged by the City for its industries. These charges will be billed through the District and remitted to the City to defray treatment costs.” (ECF No. 1-8 at PageID 30; Exhibit 22.)

17. In a letter dated March 28, 2018, Robert Knecht informed the District that Memphis would no longer provide wastewater treatment services to the District after termination of the Agreements on September 22, 2023. (See ECF No. 136 at PageID 1835; Exhibit 1.)

18. Mr. Knecht’s March 28, 2018, letter requested that the District “develop and submit to Memphis for its review a detailed plan of action for the removal of its users from Memphis’ sanitary sewer system along with a proposed schedule within the next six (6) months from the date of receipt of this letter.” (See ECF No. 136 at PageID 1835; Exhibit 1; ECF No. 116 at PageID 1254.)

19. The District did not submit the requested plan of action within 6 months of Mr. Knecht’s letter. (ECF No. 116 at PageID 1255.)

20. In a letter dated October 10, 2018, Memphis Mayor Jim Strickland reiterated the City’s intent to no longer provide wastewater treatment services to the District after September 22, 2023. (See ECF No. 136 at PageID 1836–37; Exhibit 1; Exhibit 2.)

21. On December 19, 2018, Tim Verner, the District’s consulting engineer, emailed Tracy Huffman, the lead engineer for the DeSoto County Regional Utility Authority (“DCRUA”), asking to set up a meeting to discuss the possibility of DCRUA providing wastewater treatment to the District. (ECF No. 137 at PageID 2036–41; Exhibit 27.) Mr. Verner’s email stated that “the District is currently pursuing a political/legal tract with the City of Memphis in an attempt to continue utilizing the City for the treatment. However, should this prove unsuccessful, it is felt that the most cost-effective way for the District’s rate payers to have their sewage treated is to

hammer out an agreement with DCRUA and make plans for DCRUA's necessary plant expansion." (*Id.*)

22. In a letter dated June 24, 2019 from Fisher and Arnold, the District detailed what it had done to date to effectuate the disconnection of the District from the City's wastewater system. (ECF No. 136 at PageID 1838–41; Exhibit 3.) According to the Fisher and Arnold letter, the District had identified two potential options for treatment of its wastewater: (1) the District would build a new facility in western DeSoto County that would discharge into the Mississippi River, or (2) the District would contract with DCRUA for wastewater treatment, which would require a significant expansion of DCRUA's Johnson Creek Wastewater Treatment Facility ("Johnson Creek WWTF"). (ECF No. 136 at PageID 1839–41; Exhibit 3; *see also* ECF No. 141 at PageID 2358–59.) At that time, the District had undertaken "planning level assessments" for these two options. (ECF No. 136 at PageID 1840; Exhibit 3.) The District had also retained RJN Group to perform flow monitoring and had begun "planning level estimates and construction estimates" related to costs to build a new plant or expand DCRUA's Johnson Creek WWTF. (ECF No. 136 at PageID 1840; Exhibit 3.) At that time, the cost estimate for a new or expanded plant was approximately \$75 to \$85 million. (ECF No. 136 at PageID 1841.)

23. The June 24, 2019, letter from Fisher & Arnold was the only information the City had received at that time about the District's plans to disconnect from the City's wastewater system. (ECF No. 136 at PageID 1840.) Scott Morgan testified that the City did not interpret the District's actions outlined in the letter as a good faith attempt to disconnect from the City's system. (*Id.*) On cross-examination, Mr. Morgan acknowledged, however, that the City would "probably not" "start spending tens of millions on a project if it didn't think it had to." (*Id.* at PageID 1875.)

24. According to Charles Mason Davis, the District had not begun looking for financing for building a new wastewater treatment plant as of March 26, 2021. (ECF No. 138 at PageID 2188–89.)

25. As of the trial date, the District and DCRUA had held multiple meetings regarding DCRUA treating the District’s wastewater, and they had draft agreements for the wastewater treatment and financing that had been reviewed by legal counsel, DCRUA’s Board, and the District’s Commissioners. (ECF No. 137 at PageID 2059.) According to Tracy Huffman, the necessary agreements between the District and DCRUA were “almost . . . in place.” (ECF No. 141 at PageID 2360.)

26. According to Robert Knecht, as of the beginning of trial, the District had not “taken significant steps” to disconnect from the City’s sewer system. (ECF No. 141 at PageID 2293.)

27. To date, the City continues to accept and treat the District’s wastewater in accordance with the Agreements, (*see* ECF No. 116 at PageID 1255), but the City has taken the position that neither the Agreements, nor equitable considerations can compel it to continue treating the District’s wastewater after September 22, 2023, (*see* ECF No. 147 at PageID 2510–11).

28. According to Tim Verner, prior to this Court’s summary judgment ruling, the District believed in good faith that the City had violated the Agreements by telling the District that the City would no longer treat the District’s wastewater after September 22, 2023. (ECF No. 137 at PageID 2106–07.) And given the associated costs, Mr. Verner did not believe it would have been reasonable for the District to begin intense design work on a new wastewater treatment plant prior to the Court’s ruling. (*Id.*)

B. Memphis' Sewer System and Sewer Rate

29. Memphis has separate sewer and storm water systems. (ECF No. 141 at PageID 2286.)⁹

30. Memphis has approximately 3,200 miles of sanitary sewer collection systems, which are the underground pipes that transport wastewater to the City's treatment plants. (ECF No. 141 at PageID 2286.) Memphis' sanitary sewer system is one of the largest in the surrounding area; the nearest comparable separate sanitary sewer systems in terms of size are Houston, Texas and Atlanta, Georgia. (*Id.* at PageID 2285–86.)

31. The City's Sewer Fund has 350 employees, and it runs the two largest wastewater treatment facilities in this region, which treat 60 billion gallons of wastewater annually. (ECF No. 141 at PageID 2287.)

32. The City has imposed a moratorium on new connections to the City's sewer system in unincorporated Shelby County, Tennessee, subject to certain exceptions, including for "legacy access." (ECF No. 141 at PageID 2289–91.)

33. The City's citizens pay \$3.32 per 1,000 gallons for wastewater. (ECF No. 136 at PageID 1871; ECF No. 141 at PageID 2300–01, 2304.)

34. The City's current rate of \$3.32 per 1,000 was the product of several rate increases over a period of years that began in 2017. (ECF No. 141 at PageID 2310.)¹⁰ According to Robert Knecht, the rate went from approximately \$2.87 to \$3.01 then to \$3.32. (*Id.*)

⁹ (*See also* ECF No. 110 at PageID 1186–87.)

¹⁰ *See also* Code of Ordinances, City of Memphis, Tennessee, Sec. 13-28-1 (setting \$3.32 rate effective beginning January 1, 2020.)

35. The City's current sewer rate of \$3.32 per 1,000 gallons is insufficient to provide funding for "all the programs" that the City currently needs, and Mr. Knecht anticipates that a rate increase will be necessary in the next year or two. (ECF No. 141 at PageID 2315.)

36. The City's sewer rate is "significantly lower" than other jurisdiction's sewer rates, both within Tennessee and nationally. (ECF No. 137 at PageID 1911–13; Exhibit 19 at p. 80, COM_014963.)

37. The City anticipates new industries will locate in Memphis to support the new Blue Oval City development. (ECF No. 141 at PageID 2335–36.)

38. The Maxson Plant is permitted for 90 million gallons per day, and it has a peak treatment capacity of 160 million gallons per day. (*See* Exhibit 16; ECF No. 141 at PageID 2319–20; ECF No. 135 at PageID 1667, 1731.)

39. The Maxson Plant treats an average of just under 70 million gallons per day. (ECF No. 135 at PageID 1695; Exhibit 14 at COM_002234; *see* Exhibit 11.)

40. The calculation for the District's volumetric rate for FY 2022 uses a daily flow from the District of 7.362 million gallons per day, and a total flow to the Maxson Plant of 64.27 million gallons a day. (Exhibit 11; *see* ECF No. 136 at PageID 1883; ECF No. 135 at PageID 1666–67.) However, a letter from Bradley Davis dated July 2, 2020, states that the District's daily flow is 9.5 million gallons per day. (*See* Exhibit 16.)

C. The Consent Decree and Inter-Jurisdictional Agreement Program

41. The City is a party to a consent decree between itself, the United States Environmental Protection Agency ("EPA"), and the Tennessee Clean Water Network in Case No. 2:10-cv-0283-SHM-dkv ("Consent Decree"), which addresses the City's alleged violations of the

Clean Water Act from sanitary sewer overflows (“SSOs”). (ECF No. 136 at PageID 1842; Exhibit 4.)

42. The Consent Decree requires the City to develop, submit, finalize, and implement plans for the continued improvement of its wastewater collection and transmission system as well as its wastewater treatment plants to prevent future SSOs. (*See* Exhibit 4.)

43. The City may be subject to fines for SSOs, which are a violation of the Clean Water Act and the Consent Decree. (ECF No. 136 at PageID 1852.)

44. The Consent Decree also required the City to establish an Inter-Jurisdictional Agreement Program (“IJA Program” or “IJAP”). (ECF No. 136 at PageID 1843–44; Exhibit 4; *see also* ECF No. 141 at PageID 2297–98; Exhibit 5.)

45. The EPA approved the City’s revised IJA Program on March 19, 2018. (ECF No. 136 at PageID 1844; Exhibit 5.)

46. The IJA Program sets forth the minimum requirements applicable when the City “renews existing agreements or enters into new agreements with another municipality that covers the collection, conveyance, and treatment of sewage by Memphis from municipal satellite sewer systems . . .” (Exhibit 5.)

47. The IJA Program defines “agreement” to mean “a contract between Memphis and a satellite municipality subject to the conditions as set forth in the IJAP and such other contractual provisions to which the parties may otherwise agree.” (Exhibit 5.)

48. The IJA Program does not require the City to renew any existing agreements or to enter into new agreements, but if the City chooses to do so, that agreement must be consistent with the requirements of the IJA Program. (Exhibit 5.)

49. The EPA has approved the City's IJA Program, and the City may enter into agreements with a satellite municipality without EPA approval if that agreement is consistent with the requirements of the IJAP; however, any material changes to the IJAP's requirements would likely require EPA approval. (ECF No. 135 at PageID 1708.)

50. The City has wastewater treatment agreements with Collierville, Lakeland, and Millington that satisfy the IJAP's requirements. (ECF No. 141 at PageID 2298.)

51. According to Mr. Knecht, the City is able to negotiate terms such as length and rates when it enters into a contract under the IJAP. (ECF No. 141 at PageID 2300.)

52. The agreements with Collierville, Lakeland, and Millington provide that they pay a volumetric rate of \$3.32 per 1,000 gallons. (ECF No. 141 at PageID 2300–01, 2304.)

53. In its annual report required under the Consent Decree, the City stated that the majority of SSOs—76 percent—that occurred between October 2020 and September 2022 “were the result of grease blockages within the system,” and that “trend is consistent with the findings in the previous Annual Reports.” (ECF No. 141 at PageID 2324–26; Exhibit 32.)

54. In correspondence between the City and TDEC in 2019, the City stated that it believed the District's flow potentially contributed to three of the 22 violations listed in TDEC's 2019 letter; two violations in February 2019 and one violation in December 2018. (ECF No. 138 at PageID 2203–05.) The City asserted that these three violations were due to “8 million gallons of excess flow.” (*Id.* at PageID 2203–04.)¹¹

55. In a letter dated September 24, 2020 from the City to TDEC,¹² the City stated that “at a minimum, the alleged February 2020 TSS monthly average exceedances would not have

¹¹ The letters between the City and TDEC were not introduced during trial.

¹² The letters between the City and TDEC were not introduced during trial.

occurred if the District did not discharge to the Memphis sewer system.” (ECF No. 138 at PageID 2206–07.) In toto, Memphis told TDEC that “at a minimum,” two of 43 violations were attributable in part to the District. (*Id.* at PageID 2208.)

56. The IJAP’s pretreatment requirements do not apply to satellite municipalities located in Mississippi. (*See* Exhibit 5 at COM_015047-COM_015048; *see also* ECF No. 127-2 at PageID 1610–13.)

D. The District’s Volumetric Rate

57. The 1975 Agreement provided an initial volumetric rate for the District, which was “subject to review and adjustment after 12 months operation and annually thereafter to reflect the actual cost to the City of treating and disposing of the wastewater from the District.” (*See* ECF No. 1-6 at PageID 23.)

58. The 1975 Agreement provided that “the following items will be considered in making adjustments” to the District’s volumetric rate: “A. Cost of operation and of the interceptor sewer line and treatment plant”; “B. Actual cost of constructing the line and plant”; and “C. Grants-in-aid-of-construction not repayable.” (*See* ECF No. 1-6 at PageID 23.)

59. The 1975 Agreement provided that the “construction and operation costs shall be allocated between the City and the District proportionately according to the use by each . . . based on average flow and wastewater characteristics.” (*See* ECF No. 1-6 at PageID 23.)

60. The 1975 Agreement further provided that “rate shall be reviewed annually and adjusted to reflect the actual cost of providing the service. It is the intention of the parties that the City provide the service at its actual cost and the rates will reflect this intention.” (*See* ECF No. 1-6 at PageID 23.)

61. The volumetric flow of wastewater coming from the District to the City is determined from flow meter and water usage data. (ECF No. 138 at PageID 2205.)

62. Pursuant to a formula agreed to by the parties, the District currently pays the City \$0.9612 per 1,000 gallons.¹³ (ECF No. 136 at PageID 1864, 1868.) This “volumetric charge” is the sum of (1) the “Interceptor Rate,” (2) the “Treatment Rate,” and (3) the “Expansion Rate,” each of which is calculated according to its own formula. (ECF No. 135 at PageID 1666–72.)

63. The “Interceptor Rate” was a payment on the City’s debt service for the District’s 54 percent share of the Tennessee portion of the Horn Lake Interceptor. (ECF No. 135 at PageID 1670–71; Exhibit 12; *see also* Exhibit 11.) This amount is currently \$0 because the recovery period ended in 2007. (ECF No. 135 at PageID 1670–71; Exhibit 12; *see also* Exhibit 11.)

64. The “Treatment Rate” is the District’s share of operation and maintenance (“O&M”) costs, which are calculated based on the District’s flows for the previous year. (ECF No. 135 at PageID 1671–72; *see* Exhibit 11 at District-005671.) The Treatment Rate includes a charge for maintenance that is equal to one percent (1%) of the City’s construction cost of the Horn Lake Interceptor located in Tennessee. (ECF No. 137 at PageID 2108–09; Exhibit 11 at District-005671; Exhibit 12 at COM_011694.)

¹³ This rate is sometimes expressed as \$0.719 per CCF. (*See* Exhibit 11 at District-005673.) CCF means “per 100 cubic feet.” (ECF No. 135 at PageID 1698.) There are 748 gallons per CCF, so there are 7.48 gallons per one cubic foot. (*Id.* at PageID 1698.) This Court will refer to the rate per 1,000 gallons. To convert a rate given in CCF to per 1,000 gallons, the rate is divided by 748, which yields the per gallon rate. (*See* ECF No. 139 at PageID 2250–51.) That amount is then multiplied by 1,000 to get the per 1,000 gallons rate. (*Id.*) For example, the District’s volumetric rate for fiscal year 2022 was \$0.719 per CCF. (*See* Exhibit 11 at District-005673.) So, \$0.719 divided by 748 equals \$0.0009612 per gallon. That per gallon rate is then multiplied by 1,000, which yields \$0.9612 per 1,000 gallons. (*See also* ECF No. 135 at PageID 1698.)

65. The “Expansion Rate,” is the District’s share of capital costs plus its share of a Payment-in-Lieu-of-Taxes (“PILOT”) on capital improvements. (ECF No. 135 at PageID 1671–72; see Exhibit 11 at District-005673.)

66. For fiscal year 2022, some of the capital costs that were included in the Expansion Rate are for projects the City anticipates will have a useful life beyond the date the District disconnects from the City’s system. (ECF No. 135 at PageID 1672–74.)

67. Scott Morgan testified that the current formula used to calculate the District’s rate was most recently modified around 1980. (*See* ECF No. 135 at PageID 1665–66; Exhibit 12.) However, as set forth above, the current formula includes a charge for the District’s share of a PILOT, (*see* ECF No. 135 at PageID 1669; Exhibit 11 at District-005673), which is not included in the formula from 1980. There is no evidence in the record reflecting when the PILOT payment was added to the formula.

68. The City’s position is that the rate formula in the 1975 Agreement is “outdated,” because it does not “take into consideration the whole system.” (ECF No. 141 at PageID 2304–05.)

69. The District is the only bulk customer whose rates are calculated based on a single wastewater treatment plant. (ECF No. 141 at PageID 2306.)

70. The District’s customers do not pay \$0.96 per 1,000 gallons of wastewater. The District adds its own O&M costs to this rate, which it then charges its customers, the cities of Southaven and Horn Lake and the Horn Lake Water Association, which maintain their own collection and billing system and therefore add additional costs to the rate the District charges them. (ECF No. 137 at PageID 2050–51.) From 1989 to 2021, the District added approximately

\$0.23 per 1,000 gallons,¹⁴ but this was recently increased. (*Id.* at PageID 2062–63.) Mr. Verner was unsure of the exact amount of the increase, but initially estimated it to be \$0.33 per 1,000 gallons.¹⁵ (*Id.* at PageID 2050–51, 2100–01.)

E. The City’s Wastewater Treatment Services to Other Cities and Municipalities

71. The City provides wastewater treatment services for Collierville, Lakeland, Millington, Bartlett, and Germantown. (ECF No. 136 at PageID 1866–67; ECF No. 141 at PageID 2334–35; ECF No. 135 at PageID 1674.)

72. The City provides wastewater treatment services to Collierville, Lakeland, and Millington pursuant to agreements that meet the requirements of the IJAP. (ECF No. 141 at PageID 2298.)

73. Collierville, Lakeland, and Millington pay \$3.32 per 1,000 gallons, (ECF No. 136 at PageID 1866–67; ECF No. 141 at PageID 2300–01, 2304), which the City argues is a “holistic” rate for costs associated with the entire wastewater system. (ECF No. 136 at PageID 1864–65; ECF No. 135 at PageID 1704.)

74. Bartlett pays a volumetric rate of \$1.38 per 1,000 gallons. (ECF No. 135 at PageID 1674.)

75. Germantown pays “a percentage of the Memphis share,” which equates to an approximate volumetric rate of \$1.38 or \$1.40 per 1,000 gallons. (ECF No. 135 at PageID 1674.)

¹⁴ Mr. Verner testified the O&M charge was \$0.17 per CCF, (ECF No. 137 at PageID 2062), which is converted to the per 1,000 gallons charge using the following formula: $0.17 \div 748 \times 1,000 \approx 0.2272$. *See supra* p. 27 n.13.

¹⁵ Mr. Verner testified the O&M charge was recently increased to \$0.25 per CCF, (ECF No. 137 at PageID 2063), which is converted to the per 1,000 gallons charge using the following formula: $0.25 \div 748 \times 1,000 \approx 0.3342$. *See supra* p. 27 n.13.

76. The Sewer Fund does not perform billing for wastewater services; instead, MLGW performs those services, and the Sewer Fund pays MLGW a percentage of the fees collected. (ECF No. 141 at PageID 2301–03.)

77. Annually, the Sewer Fund pays MLGW approximately \$700,000 for collection and billing services. (ECF No. 141 at PageID 2303.)

78. Collierville has its own billing and collection system, and MLGW does not perform billing and collection for Collierville. (ECF No. 141 at PageID 2301–03.)

79. Lakeland and Millington do not have their own billing and collection systems; MLGW performs those services for Lakeland and Millington. (ECF No. 141 at PageID 2301–03.)

80. Lakeland and Millington pay approximately one percent of their volumetric rate for MLGW’s billing and collection services. (ECF No. 141 at PageID 2301–02; ECF No. 135 at PageID 1676–78.) For Lakeland, that totals approximately \$250 a month; for Millington, that totals approximately \$50 a month. (ECF No. 141 at PageID 2302–03.)

81. Germantown’s wastewater is treated at both the Maxson and Stiles Plants. (ECF No. 135 at PageID 1685.)

82. Collierville’s wastewater is treated at the Maxson Plant. (ECF No. 135 at PageID 1685.)

83. According to Mr. Knecht, Bartlett and Germantown are not “fair comparisons” as to rates because “they’re different situations compared to other municipalities.” (ECF No. 141 at PageID 2334–35.)

F. Inflow and Infiltration

84. Inflow and infiltration (“I&I”) is extraneous water, such as rain or ground water, that gets into the wastewater collection system via things like holes, missing manhole lids, or cracked pipes. (ECF No. 136 at PageID 1850–51.)

85. I&I is problematic because it can cause SSOs, or it may overload a treatment plant, causing upsets that result in permit violations. (ECF No. 136 at PageID 1851–52; ECF No. 135 at PageID 1741.)

86. The City presented testimony and evidence that the peak flow of water from the District during a two-year 24-hour rain event¹⁶ is seven times greater than the average daily flow from the District, which indicates that the District’s collection system has a problem with I&I. The City’s evidence included a hydraulic model of a two-year 24-hour storm event. (ECF No. 135 at PageID 1727–31; *see* Exhibit 16; Exhibit 17.)

87. The City’s hydraulic model was calibrated using three flow meters for three storm events, but at least one flow meter failed during each of the three storm events. (ECF No. 135 at PageID 1730–31, 1743, 1756–58, 1782; *see* Exhibits 16 & 17; *see also* ECF No. 135 at PageID 1774; Exhibit 18 (Technical Memo dated February 26, 2021).) The City’s hydraulic model did not include the District’s pipes and thus did not account for “storage” within the District’s system. (ECF No. 135 at PageID 1738, 1760).

88. The City’s hydraulic model is meant to provide “a very high-level look” at where and why problems, such as SSOs, occur within the City’s system; it did not look specifically at the

¹⁶ Both the City’s and the District’s hydraulic model used two-year 24-hour rain events. For Memphis, this is about 4 inches of rain in a 24-hour period. This type of storm occurs in Memphis every two years on average. (ECF No. 135 at PageID 1778.)

City's wastewater treatment plants or impacts on them from the District's wastewater flow. (ECF No. 135 at PageID 1730, 1743; *see also* Exhibits 16 & 17.)

89. The District presented testimony and evidence that the peak flow of water entering into the District's collection system during a two-year 24-hour rain event is approximately five times greater than the District's average daily flow. (ECF No. 135 at PageID 1774, 1788–90; Exhibit 18 (Technical Memo dated February 24, 2021).) The District's expert witness, Daniel Jackson, acknowledged that this deviation between average and peak flow was likely putting stress on the Maxson Plant. (ECF No. 135 at PageID 1788–90.)

90. The District's hydraulic model attempted to account for growth and predict future SSOs. Mr. Jackson's expert report notes that "growth areas will have impervious area (roof & parking lot), which will be directly connected to a stormwater system resulting in a minimal opportunity for stormwater to enter the sewerage system." (Exhibit 18 at p. 2.)

91. The District's hydraulic model looked at and predicted SSOs only for the District's system; it did not look at or model any part of the City's collection system. (ECF No. 135 at PageID 1738–39, 1779, 1786; *see* Exhibit 18 at P. 8–11.)

92. The District was aware that a "system model" showed "the District's Lateral 7, also referred to as Horn Lake Road Interceptor is hydraulically overloaded during typical wet weather storm events," due to "extreme amounts" of I&I from "upstream customer-owned collection lines" serving portions of Horn Lake, (ECF No. 138 at PageID 2192), and the District sought help in obtaining funding for I&I abatement work through the office of Senator Wicker. (*Id.* at PageID 2194.)

93. According to Bradley Davis, a typical peaking factor for peak flows compared to daily flows is 3-to-1. (ECF No. 135 at PageID 1733–34.)

94. Daniel Jackson initially testified that he generally uses a peaking ratio of 4-to-1 or lower as a standard, (ECF No. 135 at PageID 1790), but subsequently testified that he believed a peaking factor of 5 was “probably average” for this area of the country, (ECF No. 135 at PageID 1790–91, 1793).

95. The District is in the process of constructing a “peak flow storage basin,” which, once completed, will temporarily lessen the flows coming from the District during peak flow events. (ECF No. 135 at PageID 1696–97.) The District has taken numerous steps towards completing construction of the storage basin, including (a) obtaining detailed designs and specifications that have been approved by MDEQ; (b) obtaining all necessary permits; (c) purchasing the necessary real property; and (d) securing approximately \$17-\$18 million for construction with the remaining costs to be financed through a bond sale. (ECF No. 137 at PageID 2055–58.)

G. Industrial Users and Pretreatment

96. “Pretreatment” of wastewater is a process performed on-site at a customer’s business that reduces or removes pollutants from its wastewater before it is discharged from the customer into the collection system. (ECF No. 136 at PageID 1845–46.)

97. Pretreatment is done primarily for industrial dischargers to ensure that a treatment plant is not overloaded; removing some contaminants before the wastewater reaches the treatment plant helps prevent discharges from the plant of effluent with contaminants above permitted limits. (ECF No. 136 at PageID 1846–48.)

98. There are currently three industrial users located in the District, and two of those are required to have pretreatment permits. (ECF No. 137 at PageID 2017–18; ECF No. 136 at PageID 1878–80.)

99. The Tennessee Department of Environment and Conservation (“TDEC”) sets the effluent limits for the City’s two wastewater treatment plants. (ECF No. 136 at PageID 1847.)

100. TDEC has given the City authority to issue pretreatment permits for its industrial users located in Tennessee. A user’s pretreatment permit sets forth the effluent limits for its wastewater discharge and allows the City to perform sampling of the user’s wastewater to ensure compliance with the permit’s limits. (ECF No. 136 at PageID 1849.)

101. The City does not issue permits for industrial users located in the District; instead, the Mississippi Department of Environmental Quality (“MDEQ”) issues permits for those users. (ECF No. 136 at PageID 1854.)

102. MDEQ’s pretreatment permit limits are less stringent than the City’s, which may allow the District’s industrial users to discharge water with contaminant or pH levels that do not comply with the City’s Sewer Use Ordinance (“SUO”). (ECF No. 136 at PageID 1854–55.)

103. Industrial discharges that do not comply with the City’s SUO have the potential to overwhelm the City’s wastewater treatment plants, or they may cause damage to the City’s collection and treatment system. (ECF No. 136 at PageID 1855.)

104. The City is unable to inspect industrial users located in the District in the same manner as those in Tennessee and has had disagreements with MDEQ about scheduling inspections. However, when the City has directly asked the District’s representative, Tim Verner, to facilitate inspections, those requests have never been denied. (ECF No. 136 at PageID 1852–78; Exhibit 9.) It is unclear, however, whether Tim Verner had the authority or was otherwise able to facilitate those requests. (ECF No. 135 at PageID 1702.)

105. There is at least one industrial user located in the District that has wastewater with a pH that does not comply with the City’s SUO. (ECF No. 137 at PageID 2104.) This industrial

user has a permitted discharge of up to 40,000 gallons a day and is located about 4.5 miles from the state line. (*Id.* at PageID 2109–10.)

106. A “significant portion” of the District’s customers are residential users, which typically do not cause problems with strength of wastewater. (ECF No. 138 at PageID 2178.)

H. The Requisite Cost, Financing, and Time for the District to Build a Treatment Facility and Disconnect from the City’s System

107. To disconnect from the City, the District plans to contract with the DeSoto County Regional Utility Authority (“DCRUA”) to treat its wastewater; this will require DCRUA to significantly expand its Johnson Creek Wastewater Treatment Facility (“Johnson Creek WWTF”). (ECF No. 141 at PageID 2358–59.)

108. The Johnson Creek WWTF is currently limited to treating 2 million gallons a day, so the expansion required to treat the District’s wastewater is equivalent to building a new treatment plant. (ECF No. 141 at PageID 2359.)

109. The current estimate to complete the necessary expansion of the Johnson Creek WWTF is \$235 million, which nearly equals the amount DCRUA has spent in total over the last 20 years on projects. (ECF No. 141 at PageID 2363–64.)

110. Southaven’s mayor, Darren Musselwhite, has been involved in seeking federal and state funds to assist the District and DCRUA in building a new wastewater treatment plant. (ECF No. 138 at PageID 2126–27.) When seeking federal and state funding, Mayor Musselwhite encountered questions from officials regarding the overall amount of money needed for the project and whether the District could continue to have Memphis treat its wastewater. He noted that “a lot of them kind of stop the discussions about funding until we got a judgment from this Court.” (*Id.* at PageID 2127.)

111. The engineering fees for the design portion of the Johnson Creek WWTF expansion are likely to be between 5 and 10 percent of the project's cost, or approximately \$11,500,000 to \$23,000,000. (ECF No. 135 at PageID 1751–52). The District will need to obtain this funding before it can begin the design phase of the project.

112. The District will not be able to use general obligation bonds to fund the expansion project, but it may use revenue bonds. (ECF No. 141 at PageID 2401.) General obligation bonds are “backed by property tax or [have] the support or existence of property tax”; they are “a full faith and credit pledge of an issuer.” (*Id.*) Revenue bonds are “backed . . . by a user fee or revenue stream that’s tied to an enterprise activity that generates a user fee.” (*Id.*)

113. The interest rate for any revenue bonds will depend in part on whether the bonds are taxable or tax-exempt. A taxable bond will generally have a higher interest rate than a tax-exempt bond, but bonds must meet certain requirements in order to qualify as tax-exempt. For example, to qualify as tax-exempt, the bond’s proceeds must be “substantially spent within a 36-month time window.” Failure to meet this requirement could make the bonds taxable. (ECF No. 141 at PageID 2408–09, 2426–27.)

114. Bradley Davis prepared a report and testified for the City as to the length of time it should take the District to construct a new wastewater plant that discharges into the Mississippi River.

115. Bradley Davis’ experience includes work on two wastewater treatment facilities. The first was for the city of Collierville, which was an expansion done on an existing plant that remained in operation during the expansion process; the second was a new facility at Meeman-Shelby Forest State Park (“Shelby Forest”), which involved design and permitting for a new facility. (ECF No. 135 at PageID 1713.)

116. Bradley Davis' work on the new facility at Shelby Forest included obtaining a NPDES permit for discharging into the Mississippi River. (ECF No. 135 at PageID 1744.) A National Pollutant Discharge Elimination System ("NPDES") permit that allows the discharge of treated wastewater into surface water. (*Id.* at PageID 1743–44.) The NPDES permit for the Shelby Forest facility was for less than 1 million gallons a day, which is the largest volumetric discharge for an NPDES permit on which Mr. Davis has worked. (*Id.* at PageID 1744, 1747.) Bradley Davis' experience on this facility was "over ten years" ago. (*Id.* at PageID 1744.)

117. According to Mr. Davis, constructing a wastewater treatment plant involves various phases, including permitting, design, easements, land acquisition, receiving and addressing public comments and construction. (ECF No. 135 at PageID 1714–17, 1750; Exhibit 15.) Mr. Davis opined that the District could complete such a facility within six to seven years. (ECF No. 135 at PageID 1714–17, 1750; Exhibit 15.)

118. Mr. Davis's expert report, (*see* Exhibit 15), does not specifically mention funding, but he testified that he considered it in his opinion of the overall timeline. (ECF No. 135 at PageID 1750.)

119. Tim Verner prepared a report and testified for the District about his opinion on the time necessary for the District to construct an alternative wastewater treatment plant. (ECF No. 137 at PageID 2012; Exhibit 21.)

120. Mr. Verner has experience designing wastewater treatment facilities, including plant expansions in Collierville, Tennessee; Covington, Tennessee; Whiteville, Tennessee; and Oxford, Mississippi. (ECF No. 137 at PageID 2007.)

121. Mr. Verner is currently the engineer of record for a large expansion of the West Memphis utility's wastewater treatment plant in West Memphis, Arkansas. (ECF No. 137 at

PageID 2007.) That project is an expansion of the plant's permitted discharge limit from 6.3 million gallons a day to 12 million gallons a day average daily flow with a maximum flow of 18 million gallons a day. (*Id.* at PageID 2008–09.)

122. Mr. Verner opined that 8-10 years is the “best case” or minimum amount of time it will take the District to complete construction and disconnect from the City's wastewater system. (ECF No. 137 at PageID 2076; Exhibit 21.) However, Mr. Verner believes that it could take up to 13 years if there is a permit challenge. (ECF No. 137 at PageID 2076; Exhibit 21.)

I. The City's WIFIA Loan

123. In July 2018, the City sought a loan through the EPA's WIFIA program¹⁷ for upgrades at the Maxson Plant. (See ECF No. 135 at PageID 1680–92; Exhibit 13; *see also* Exhibit 14.)

124. As set forth in the City's cover letter for the WIFIA loan, the Maxson Plant upgrades project for which the WIFIA loan was sought had “been undergoing planning, design and the recent commencement of the initial construction phases since 2013 when the initial alternatives analysis was completed to begin implementation of the multiphase program.” (Exhibit 13 at District-000340.)

125. At the time of the City's WIFIA loan application, the project had an estimated cost of \$283,310,120. (ECF No. 135 at PageID 1688; Exhibit 13 at District-000360.)

126. The City sought a WIFIA loan of \$137,493,607. (ECF No. 135 at PageID 1689; Exhibit 13 at District-000360.)

¹⁷ WIFIA stands for Water Infrastructure Finance and Investment Act. (ECF No. 135 at PageID 1680–81.)

127. Prior to seeking the WIFIA loan, the City secured funding from the State of Tennessee through the State Revolving Fund (“SRF”). (ECF No. 135 at PageID 1684.)

128. The City ultimately obtained a WIFIA loan for approximately \$156 million, which represented 49 percent of the project’s total cost. (ECF No. 135 at PageID 1690–92.)

129. The City received the funds for the WIFIA loan sometime in 2020. (ECF No. 135 at PageID 1700.)

J. The District’s Customer—Southaven, Mississippi

130. As of the last census, the population of Southaven was approximately 58,000 people. (ECF No. 138 at PageID 2119.)

131. As Southaven’s mayor, Darren Musselwhite oversees Southaven’s utilities department and is familiar with the Southaven’s sewer system and how it works. (ECF No. 138 at PageID 2119.)

132. Southaven has its own sewer collection system but does not have a wastewater treatment facility. (ECF No. 138 at PageID 2119–20.)

133. Memphis’ Maxson Plant treats the wastewater for approximately 75 percent of Southaven’s citizens, and DCRUA treats the wastewater for the remaining 25 percent. (ECF No. 138 at PageID 2120.)

134. Southaven’s residential sewer rate is approximately \$3.96 per 1,000 gallons.¹⁸ (ECF No. 138 at PageID 2121–23.)

¹⁸ Mayor Musselwhite testified the rate was \$2.96 per 100 cubic feet or CCF. The Court converted this to per 1,000 gallons using the following equation: $2.96 \div 748 \times 1,000 \approx 3.9572$. *See supra* p. 27 n.13. Mayor Musselwhite testified similarly. (ECF No. 138 at PageID 2122–23.)

135. Southaven's industrial sewer rate is approximately \$5.94 per 1,000 gallons.¹⁹ (ECF No. 138 at PageID 2122–23.)

136. Southaven's average citizen uses approximately 7 CCF per month, making the average sewer bill about \$20.72 a month. (ECF No. 138 at PageID 2123–24.)

137. If the District and DCRUA finance the wastewater treatment plant and other necessary infrastructure only through bonds, Southaven's sewer rate could increase approximately 400 percent. (ECF No. 138 at PageID 2124–25.)

138. The District generally treats wastewater from citizens living in the original or older areas of Southaven. (ECF No. 138 at PageID 2125–26.)

139. Southaven's citizens all pay the same sewer rate whether Memphis or DCRUA treats their wastewater. (ECF No. 138 at PageID 2135.)

140. According to Mayor Musselwhite, Southaven does not expect much future growth in industrial sewer users because “most of that . . . has been built out.” (ECF No. 138 at PageID 2130.) Instead, Southaven expects most of its future growth to be residential, retail and service businesses, and tourism. (*Id.* at PageID 2030–31.)

K. The Parties' Positions and Expert Opinions on Sewer Rates

141. The City's position is that the District is similarly situated to Collierville, Lakeland, and Millington and should pay the same volumetric rate of \$3.32 per 1,000 gallons. (ECF No. 136 at PageID 1869–70.)

¹⁹ Mayor Musselwhite testified the rate was \$4.44 per 100 cubic feet or CCF. The Court converted this to per 1,000 gallons using the following equation: $4.44 \div 748 \times 1,000 \approx 5.9358$. *See supra* p. 27 n.13. Mayor Musselwhite testified similarly. (ECF No. 138 at PageID 2122–23.)

142. Two witnesses testified on behalf of the City as experts on rates under Federal Rule of Evidence 702: Gary Shambaugh and Richard Michelfelder. (ECF No. 137 at PageID 1898–99, 1955.)

143. Mr. Shambaugh and Dr. Michelfelder performed a two-part cost-of-service study for the City: first, a Cost of Service Study for Test Year 2025, and second, a Development of Risk Premium Study (to add to the Cost of Service Study). (ECF No. 137 at PageID 1900; Exhibit 19, “Shambaugh & Michelfelder Final Report.”)

144. According to Mr. Shambaugh, the goal of a cost-of-service study is to determine revenue requirements for various classes of customers and then use that information to prepare a “rate design,” which is a minimum base rate per thousand gallons to charge customers. (ECF No. 137 at PageID 1895–96, 1898.)

145. The Shambaugh & Michelfelder Final Report states that the “total revenue requirement for a sewer utility should be sufficient to ensure the provision of adequate wastewater service and to ensure the maintenance, development, and long-term financial viability of the utility.” (Exhibit 19 at p. 9.) It further provides that the “principal components of the revenue requirement for a public owned . . . wastewater utility typically include operating and maintenance expenses, annual debt service requirements, capital expenditures, capital and operating reserves, debt service coverage, and, payments for shared services.” (Exhibit 19 at p. 9.)

146. The Shambaugh & Michelfelder Final Report concludes that “the cost-of-service based wholesale rate *exclusive of a margin or risk premium* for customers that are not within the City’s jurisdiction is \$1.60257 per 1,000 gallons.” (Exhibit 19 at p. 15; ECF No. 137 at PageID 1908–09.) In calculating this rate, Mr. Shambaugh and Dr. Michelfelder allocated all “strength of wastewater” revenue requirements to industrial users. (ECF No. 137 at PageID 1910–11; Exhibit

19 at p. 8.) The calculation also did not consider I&I. (ECF No. 137 at PageID 1909–11; Exhibit 19 at pp. 7–8.)

147. Mr. Shambaugh and Dr. Michelfelder calculated the rate for municipal customers by reducing the flows allocated to the municipal classes to account for variations in the level of services to different municipal customers. (ECF No. 137 at PageID 1919, 1932.) Specifically, “[s]ince volume flows and maximum day values are used to allocate costs by class, the municipal volume flow and maximum day values were adjusted downward, for allocation purposes, by 45% to reflect that the City does not provide collection services to these municipalities.” (Exhibit 19 at p. 13.) This reduction in flows reduced not only the projected 2025 wastewater volume, (*see* Exhibit 19 at p. 15, “Wholesale Wastewater Rate Designs,” Line (2)), but also the projected 2025 cost of service municipal revenue requirement, (*see id.* at Line (1)). (ECF No. 137 at PageID 1933–34.)

148. The Shambaugh & Michelfelder Final Report further recommends that a risk premium of \$1.03 per 1,000 gallons be added to the cost-of-service wholesale rate of \$1.60257 per 1,000 gallons for a total rate of \$2.63 per 1,000 gallons. (Exhibit 19 at p. 50; ECF No. 137 at PageID 1969–73.)

149. A risk premium is “compensation in the form of a rate of return for being exposed to a risk.” (ECF No. 137 at PageID 1955.) According to the Shambaugh & Michelfelder Final Report, once the City, as a publicly-owned system, “sells its service outside the City limits, that portion of the City’s wastewater system is a business and the City becomes the investor in that business.” (Exhibit 19 at p. 34.) The Shambaugh & Michelfelder Final Report therefore concludes that “the City should be collecting rates based on service costs plus a risk premium to reflect the investment risk of the business in providing service to outside customers.” (*Id.*)

150. According to Dr. Michelfelder, a risk premium is appropriate for “outside customers” because those customers are not exposed to various risk inherent in the City’s ownership of the wastewater system. (ECF No. 137 at PageID 1972–75; Exhibit 19 at p. 35–38.) According to Dr. Michelfelder, the City’s citizens, on the other hand, are exposed to risks of ownership, and they may have to pay increased property taxes in an “extreme event,” if other sources of funding are exhausted or unavailable. (ECF No. 137 at PageID 1974–75; Exhibit 19 at p. 35–36.)

151. The Michelfelder & Shambaugh Final Report notes, however, that Mr. Shambaugh and Dr. Michelfelder “found no municipal utility rate studies that justify the costs to serve and a risk premium rate” that was used in their Final Report, “except in those states where service to customers outside the providing municipality or city is regulated by the state utility commission or governing bodies.” (Exhibit 19 at p. 49; ECF No. 137 at PageID 1979–82.) During Dr. Michelfelder’s testimony, the only example given of such a state was Pennsylvania, but he could not name a specific municipality within Pennsylvania charging a rate premium. (ECF No. 137 at PageID 1980–82.)

152. According to Mr. Shambaugh, the City’s rate of \$3.32 per 1,000 gallons is “higher than the actual cost of service,” but that rate is significantly lower than rates nationally and within Tennessee. (ECF No. 137 at PageID 1911–16, 1946; Exhibit 19 at p. 80.)

153. Wyatt Terry Mitchell testified on behalf of the District as an expert on utility rates under Federal Rule of Evidence 702.

154. Mr. Mitchell’s opinion is that it was an error for the Shambaugh & Michelfelder Final Report to include the City’s municipal customers in a single group due to the differences in services and costs. (ECF No. 138 at PageID 2146–47.)

155. According to Mr. Mitchell, the rate design for a wholesale customer typically looks at the marginal cost of the wholesale customer on the overall system, and the wholesale customer's rate is designed so that those costs do not impact the rates for retail customers. (ECF No. 138 at PageID 2147.)

156. Mr. Mitchell opined that the \$2.63 per 1,000 gallons rate calculated by Mr. Shambaugh and Dr. Michelfelder was appropriate for retail customers; however, he testified that it is not a "proper rate" for wholesale customers because they do not "use a significant part of the system. They use a specific part of the system." (ECF No. 138 at PageID 2148.)

157. Mr. Mitchell testified that the projected rate based on the costs shown in the Shambaugh & Michelfelder Final Report using the actual flow would be \$0.88 per 1,000 gallons. (ECF No. 138 at PageID 2149.)

158. According to Mr. Mitchell, wholesale customers' "rates should be based on the cost that each customer is causing [the City's] system to incur" (ECF No. 138 at PageID 2152.) In his opinion, the calculation used for the District's rate under the Agreements is the correct method for calculating the District's rate, with the exception of the PILOT payment, which Mr. Mitchell explained did not appear to reflect costs the City incurred because of the District. (*Id.* at PageID 2154–55; Exhibit 31.)

159. Mr. Mitchell testified that a risk premium is included in the "industry standard M1 manual" for rate calculation for investor-owned utilities, but it was not appropriate to compare Memphis to investor-owned utilities due to differences in how each may raise capital. (ECF No. 138 at PageID 2160, 2164.)

160. Mr. Mitchell has never seen a risk premium applied in a municipal rate study during his 47 years of experience. (ECF No. 138 at PageID 2158.)

VI. CONCLUSIONS OF LAW AND EQUITY

A. Availability of Equitable Relief

In its proposed conclusions of law, the City argues that equitable relief is not available, and it cannot be compelled to continue treating the District's wastewater beyond September 22, 2023. According to the City, this is a contractual matter, and the rights of the parties are set forth in the Agreements. (See ECF No. 147 at PageID 2510.) At the same time, the City has stipulated that if it refuses to treat the District's wastewater before an alternative treatment plant is operational, a "major environmental event" would result, likely causing "large scale fish and aquatic species kills" in nearby surface waters, and also that the release of raw sewage would violate Section 301 of the Clean Water Act. (See ECF No. 145-1 at PageID 2455–58 (emphasis added).) So, to simplify, the City argues that it can refuse to treat the District's wastewater even though doing so would likely cause a violation of the Clean Water Act and create a "major environmental event." This Court is not persuaded.

First, the pretrial order in this case, (ECF No. 116), which was issued after a conference with the parties pursuant to Federal Rule of Civil Procedure 16, does not include as a claim, issue, defense, or contested issue of fact or law, that the Court may not use its equitable powers to compel the City to continue treating the District's wastewater beyond September 22, 2023, and the City never moved to amend the pretrial order. Rule 16(d) provides that the pretrial order "controls the course of the action unless the court modifies it." And "courts hold that parties generally forfeit claims or defenses not raised in the final pretrial order." See, e.g., *Ordos City Hawtai Autobody Co., Ltd. v. Dimond Rigging Co., LLC*, 695 F. App'x 864, 875 (6th Cir. 2017). As the Seventh Circuit explained:

the pretrial conference and order are a vital part of the procedural scheme created by the Federal Rules of Civil Procedure. "Because the parties rely on the pretrial

conference to inform them precisely what is in controversy, the pretrial order is treated as superseding the pleadings and establishes the issues to be considered at trial.” *Erff v. Marktton Industries, Inc.*, 781 F.2d 613, 617 (7th Cir. 1986); *see also* *Hullman v. Board of Trustees of Pratt Com. College*, 950 F.2d 665, 668 (10th Cir. 1991) (pretrial order “measures the dimensions of the lawsuit”). For this reason, “[a]ttorneys at a pre-trial conference must make a full and fair disclosure of their views as to what the real issues of the trial will be.” *Erff*, 781 F.2d 613, 617. Since the whole purpose of Rule 16 is to clarify the real nature of the dispute at issue, a claim or theory not raised in the pretrial order should not be considered by the fact-finder. *Id.* at 616–19.

Gorlikowski v. Tolbert, 52 F.3d 1439, 1443–44 (7th Cir. 1995) (internal footnotes omitted). And the Seventh Circuit’s reasoning in *Gorlikowski* is consistent with Sixth Circuit caselaw. *See, e.g.* *Gregory v. Shelby Cnty.*, 220 F.3d 433, 442–43 (6th Cir. 2000); *Epazz, Inc. v. Nat’l Quality Assurance USA, Inc.*, No. 20-1552, 2021 WL 3808946, at *8 (6th Cir. Aug. 26, 2021); *Slinger v. Pendaform Co.*, No. 21-5276, 2022 WL 2133745, at *3 (6th Cir. June 14, 2022). Therefore, the City has forfeited the claim or defense that the Court cannot use its equitable authority to compel it to continue treating the District’s wastewater after September 22, 2023.

Alternatively, even if the City has not forfeited the argument, it is without merit. The City avers that this a contract matter, and the Court’s “equitable powers do not extend so far as to permit [it] . . . to force upon parties contractual obligations, terms or conditions which they have not voluntarily assumed.” (ECF No. 147 at PageID 2510 (quoting *ARC LifeMed, Inc. v. AMC-Tennessee, Inc.*, 183 S.W.3d 1, 26 (Tenn. Ct. App. 2005).) The City’s citation to *ARC LifeMed*, however, is unconvincing. At bottom, *ARC LifeMed* involved a claim and counterclaim for breach of contract for which the primary relief sought was damages. 183 S.W.3d at 25, 29–30. Prior to the passage the City quotes, the *ARC LifeMed* court began by stating that “[e]quitable considerations cannot intervene in a *pure breach of contract* action.” *Id.* at 26. This matter is not a pure breach of contract action, and the City does not seek damages as its primary relief.

Instead, the City’s Complaint seeks declaratory relief pursuant to 28 U.S.C. § 2201. A declaratory judgment action is neither legal nor equitable in nature *per se* as such relief was not available under the common law but is a creature of statute. *Gulfstream Aerospace Corp. v. Mayacamas Corp.*, 485 U.S. 271, 284 (1988); *see Gillispie v. City of Miami Twp.*, No. 3:13-CV-416, 2023 WL 4868486, at *12 (S.D. Ohio July 31, 2023). Dispute over the nature of a declaratory judgment action most often arises in the context of a party’s right to a jury trial. *See Gillispie*, 2023 WL 4868486, at *12 (collecting cases). Of course, that is not the issue here; neither party made a jury demand in this matter. Although the declaratory judgment relates to a contract, the District’s answer pleads as defenses, in part, laches and estoppel, (*see* ECF No. 23 at PageID 100), which are equitable in nature. The Court need not beleaguer the issue further, but suffice it to say, this matter does not involve purely legal issues.

The Constitution of the United States, Article 3, Section 2, provides that: “The judicial Power shall extend to all Cases, in Law and Equity, arising under . . . the Laws of the United States, and . . . to Controversies between two or more States;—between a State and Citizens of another State,—between Citizens of different States, . . . and between a State, or the Citizens thereof, and foreign States, Citizens or Subjects.” Further, “[i]t is well-established that federal courts possess broad discretion to fashion equitable remedies.” *Coal. for Gov’t Procurement v. Fed. Prison Indus., Inc.*, 365 F.3d 435, 460 (6th Cir. 2004). “Equity ‘is a salutary jurisdiction, especially where a nuisance affects the health, morals, or safety of the community. Though not frequently exercised, the power undoubtedly exists in courts of equity thus to protect the public against injury.’” *In re Nat’l Prescription Opiate Litig.*, 622 F. Supp. 3d 584, 598 (N.D. Ohio 2022) (quoting *Mugler v. Kansas*, 123 U.S. 623, 673, (1887)). In addition, “it is a fundamental principle that equity having jurisdiction for one purpose will take jurisdiction for all purposes germane thereto. ‘Equity delights

to do complete justice and not by halves.’ It will do what is necessary to grant relief as between the parties.” *Andrews v. Drake*, 83 F.2d 767, 773 (6th Cir. 1936); *see Chapman v. Sheridan-Wyoming Coal Co.*, 338 U.S. 621, 630 (1950) (“equity will administer such relief as the exigencies of the case demand at the close of the trial” (citations omitted)). In fashioning equitable relief, however, the Court may need “to retain a continuing jurisdiction to modify or change orders granted.” *In re Nat’l Prescription Opiate Litig.*, 622 F. Supp. 3d at 598 (citing *Biechele v. Norfolk & W. Ry. Co.*, 309 F. Supp. 354, 359 (N.D. Ohio 1969)).

As the City has stipulated, dire environmental consequences could result if it refuses to treat the District’s wastewater before an alternative treatment plant is operational. Just as equitable remedies are available in interstate disputes over ownership of natural resources,²⁰ so too are they appropriate in the protection of those resources. The absence of a contractual duty and the threatened environmental harms thus implicate the Court’s equitable powers to compel the City to continue treating the District’s wastewater, and the Court may then “do what is necessary to grant relief as between the parties.” *Andrews*, 83 F.2d at 773. Both parties have requested that the Court retain jurisdiction over this matter for various reasons, (ECF No. 146 at PageID 2471; ECF No. 147 at PageID 2509), and the Court finds that it is appropriate to do so because of the equitable nature of the relief.

B. The Doctrine of Unclean Hands

The City contends that the District has acted in bad faith and the doctrine of unclean hands bars the District from receiving equitable relief. (*See* ECF No. 147 at PageID 2511.)

Again, this claim or defense was not included in the pretrial order. Although the pretrial order recites many of the facts underlying the City’s argument, the City’s position in the pretrial

²⁰ *See, e.g., Mississippi v. Tennessee*, 595 U.S. 15 (2021).

order was that “the District should thus be placed on an expedited time frame of six (6) to seven (7) years, at most,” not that the District was not entitled to equitable relief at all. (*See* ECF No. 116 at PageID 1248.) And again, in the contested issues of law, the pretrial order provides that “the parties contest *the length of time* the District should be given to disconnect from the City’s system,” (*id.* at PageID 1257), not that the parties contest the District’s ability to seek equitable relief *at all*. Thus, for the same reasons set forth above, the City has forfeited any argument that the District committed bad faith conduct and cannot seek equitable relief.

Even if the City did not forfeit this argument, the District’s conduct does not warrant the application of the unclean hands doctrine. The unclean hands doctrine “provides that ‘he who comes into a court of equity, asking its interposition in his behalf, must come with clean hands.’” *In re Mattie L.*, 618 S.W.3d 335, 344 (Tenn. 2021) (quoting *C.F. Simmons Med. Co. v. Mansfield Drug Co.*, 23 S.W. 165, 168 (Tenn. 1893)). The doctrine “provides the court with a basis to decline to grant relief to parties who have willfully engaged in unconscionable, inequitable, immoral, or illegal acts with regard to the subject matter of their claims.” *In re Est. of Boote*, 265 S.W.3d 402, 417 (Tenn. Ct. App. 2007) (collecting cases). “But this defense has limitations: ‘it must be confined to the particular matter in litigation and the conduct complained of must have injured the party making the complaint.’” *Fuller v. Cmty. Nat’l Bank*, No. E201802023COAR3CV, 2020 WL 1485696, at *4 (Tenn. Ct. App. Mar. 27, 2020) (quoting *Edmisten v. Edmisten*, No. M2001-00081-COA-R3-CV, 2003 WL 21077990, at *7 (Tenn. Ct. App. May 13, 2003)).

The City contends that the District acted in bad faith by (1) taking the position in this litigation that the Agreements were not for a limited term, and (2) failing to take substantial steps to disconnect from the City’s wastewater system after its receipt of Robert Knecht’s March 28,

2018, letter. (*See* ECF No. 147 at PageID 2511.). However, neither of these things merit application of the doctrine of unclean hands in this matter.

First, the record does not support that the District acted in bad faith by taking the position that the Agreements were not for a limited term. The District's position had a factual basis and was not an unreasonable interpretation of the applicable law, and there is no evidence that the District's arguments or position were undertaken for an improper purpose. Tim Verner's uncontroverted testimony was that, prior to this Court's ruling on summary judgment, the District believed in good faith that the City's actions were in violation of the Agreements, and the Court finds that testimony credible. The Court found that the District's position, as a matter of law, did not hold water, but the District's position was not so unreasonable that it constitutes bad faith.

Second, the District's limited actions prior to this Court's ruling on the City's Motion for Summary Judgment do not show bad faith. Tim Verner's December 2018 email to Tracy Huffman—sent nearly a year prior to the City filing the Complaint in this matter—indicates the District's preference was to work out a compromise with the City, but if that was unsuccessful, the District was already making alternative plans. As this Court previously noted, the record shows that the parties engaged in negotiations prior to the City filing its Complaint, and that the parties also had at least some limited negotiations during the pendency of this matter. (*See* ECF No. 110 at PageID 1196–97.) Even Scott Morgan conceded that the City would probably not undertake a project costing tens of millions of dollars if it did not think it was necessary.

Was it possible, however, for the District to secure a large amount of funding during this time? Maybe. The City obtained a WIFIA loan for approximately \$156 million in about two years; however, planning and design on the project for which that loan was sought had begun approximately five years prior to the City's loan application, and the City had already received

some funds from Tennessee’s SRF. Also, the two-year time period encompasses only the “second phase” of the WIFIA loan application process, (*see* Exhibit 13 at District-000340, stating the letter and materials were submitted for “the second round of WIFIA Program review and selection process”), and the record does not reflect when the City submitted its initial LOI in response to the EPA’s NOFA. Overall, the circumstances surrounding the City’s WIFIA loan do not convince the Court that the District could have received similar funding in a two-year period, particularly when the City’s receipt of the loan funds in 2020 was approximately *seven years* after planning and design first began for the project. In addition, as Mayor Musselwhite testified, the parties were left in legal limbo prior to the Court’s summary judgment ruling, which (not surprisingly) hindered the District’s ability to secure commitments for state and federal funding.

After considering all the evidence, this Court finds that the District did not act in bad faith, nor did it “willfully engage[] in unconscionable, inequitable, immoral, or illegal acts” with respect to the Agreements or building a new wastewater treatment plant. The District began making alternative plans for the treatment of its wastewater before this litigation, and the lack of significant progress was at least partly due to the uncertainties attendant in this litigation, not bad faith. The City’s frustration is understandable; however, it is not a basis for applying the doctrine of unclean hands.

C. Agreement under the Inter-Jurisdictional Agreement Program

The IJAP’s requirements apply when Memphis “renews existing agreements or enters into new agreements,” and “agreement” is defined as a contract between Memphis and a satellite municipality. This Court’s order is not a contract, and therefore, the Court finds that an agreement satisfying the requirements of the IJAP is not required. Notwithstanding that an agreement is not required, should the Court order that the parties to enter such an agreement?

It is understandable why the City wants an agreement pursuant to the IJAP. Under the IJAP, agreements between the City and satellite municipalities must include certain terms, including (1) that the satellite municipality operate and maintain its system to minimize peak flows to the City's system; (2) that the satellite municipality's peak flows may not cause or contribute to an SSO in Memphis or a violation of Memphis' NPDES permit, and if they do, Memphis can impose whatever peak flow limitations it determines are necessary to prevent SSOs or permit violations; (3) installation and calibration of flow meters, with Memphis having a right to inspect and monitor the meters and data collected; (4) pretreatment requirements for industrial users; and (5) that the City has the ability to terminate the agreement due to violations of the agreement or the City's SUO. The Court, however, finds that, based on the evidence at trial, at this time, the equities do not favor the Court ordering the parties to enter an agreement pursuant to the IJAP.

First, as to the satellite municipality's duty to minimize peak flows, the District is currently constructing a peak flow storage facility that will help lessen peak flows to the City. The City did not present evidence or explain what other measures it proposes the District should take to minimize peak flows under the IJAP.

Second, the record contains limited probative evidence that the District's peak flows are causing or contributing to SSOs in Memphis or violations of Memphis' NPDES permit. The only evidence about prior SSOs that occurred in the City's system was the City's annual report under the Consent Decree, which reported a little over 450 SSOs between October 2020 and September 2022, with 76% of those occurring due to grease blockages. Nothing in the record indicates whether the District's wastewater is a substantial contributor to these grease blockages. The report does not include the locations of the SSOs, and it does not reference the impact of the District's flows on SSOs. Otherwise, the primary evidence about SSOs was the parties' respective hydraulic

models, which attempted to *predict* where SSOs would occur during wet weather events. Although both Bradley Davis and Daniel Jackson testified credibly about these models, both models were necessarily incomplete because they modeled only one party's pipes and collection system. The City's model thus did not account for potential storage in the District's pipes, and the District's model did not predict whether SSOs would occur in the City. The accuracy of the City's model was also somewhat undermined due to malfunctioning flow meters during the three events that were used to calibrate the model. Both models predicted SSOs based on a two-year 24-hour rain event, which occurs, on average, every two years, and it is unclear how many such rain events of that magnitude or greater would occur before the District begins operation of its peak flow storage facility.

Similarly, evidence in the record as to NPDES permit violations is very limited. The only evidence of specific permit violations was from Robert Knecht's deposition when he was asked questions about the City's responses to TDEC letters for violations in 2019 and 2020. (*See* ECF No. 138 at PageID 2203–09.) That testimony shows that the City believed the District's flows contributed, at least in part, to five of the 65 violations TDEC had identified. Unclear, however, is the length of time over which the violations occurred. Further, there are only limited metrics about the violations in the record. For example, one of the violations is described as a 5% exceedance and another as a 10% exceedance, but nothing in the record helps contextualize whether those exceedances are minor or severe. Finally, there does not appear to be anything in the record reflecting whether the City incurred monetary fines or other penalties due to these violations.

Third, there is no specific evidence about the current flow metering (or lack thereof) or why it is insufficient. The 1975 Agreement provides for a meter station, and the City has charged

the District a volumetric rate in accordance with that agreement. Thus, it appears the City has the ability to monitor and measure the wastewater flows coming from the District. The City brought forth no evidence showing, nor has it explained why, the current flow metering is deficient.

Fourth, the pretreatment provisions of the IJAP specifically except satellite municipalities located in Mississippi, so an agreement under the IJAP would not resolve the City's concerns and issues with MDEQ's permit limits. Moreover, there was insufficient evidence that the District's wastewater contains higher levels of contaminants or pH levels greater than the limits set forth in the City's SUO. Although industrial dischargers located in the District have the potential to discharge wastewater with contaminants or pH that do not comply with the City's SUO (due to differences in MDEQ permit limits), the City did not introduce specific evidence that the wastewater discharged from any industrial user in fact exceeded those limits or by how much.²¹ There was testimony that a single industrial user discharging approximately 40,000 gallons a day had wastewater with a pH that is higher than the City's SUO, but there were no specifics given as to how much higher the pH was or what effect, if any, 40,000 gallons of higher pH wastewater had on the pH of the District's flows that, on average, are greater than 7,000,000 gallons a day. Also of note, under the 1983 Agreement, the City may charge additional treatment costs for industrial users in the District "whose wastes are greater in strength than the concentration values established as representative of normal sewage or wastewater," (ECF No. 1-8 at PageID 30), but there was no evidence introduced about any charges to industrial users under this provision. In sum, there was

²¹ For example, Memphis City Ordinance § 13-28-1 provides for an additional treatment charge for "all users who discharge wastewater with a strength greater than domestic sewage which shall include, but is not be limited to, BOD of 250 milligrams per liter, SS of 300 milligrams per liter, and COD of 800 milligrams per liter" The City did not introduce any evidence showing that any industrial user in the District met these standards, or that the District's wastewater generally met these standards. The record contains no evidence of any testing done or samples taken from the District's wastewater or from any industrial user in the District.

a lot of testimony about potential impacts or effects of MDEQ's different pretreatment limits, but no specific evidence that these pretreatment limits are in fact a substantial issue. Any equitable relief on this basis would therefore be speculative at best.

Finally, the District is, and will be moving forward with, disconnecting from the City's system, so the City's ability to terminate an agreement under the IJAP for violations of the agreement or the City's SUO appears moot.

D. Moratoria

At trial, the City requested that the Court enjoin the District (1) temporarily from accepting new sewage or wastewater flows from all users until the District begins operating its peak flow storage facility, and (2) permanently from accepting total flows from industrial users greater than the level of flows as of September 22, 2023. However, the record does not show why such moratoria are needed or equitable.

Start with the temporary moratorium. The record does not indicate when the District's peak flow storage facility will be operational. There is also nothing in the record about what growth, if any, the District anticipates in sewer usage or flow volumes between now and whenever the peak flow storage facility becomes operational. Additionally, although there is evidence that the District likely has above average I&I entering its collection system, the record does not show a strong correlation between I&I and new sewer connections. According to Daniel Jackson's expert report, "growth areas" present "a minimal opportunity for stormwater to enter the sewerage system." (Exhibit 18 at p. 2.) To the extent that infiltration of groundwater occurs due to cracked pipes, it is unclear why this would be an issue for new sewer connections. The City also argues that continuing to accept and treat the District's wastewater limits its growth because the Maxson Plant has limited capacity. Yet, there are only a few references in the record about the current

daily flows to the Maxson Plant in relation to its permitted or peak capacity.²² Most problematic, there is nothing in the record quantifying the City's anticipated growth and wastewater treatment needs compared to current capacity.

Similar deficiencies in the record also weigh against a permanent moratorium on industrial flows at this time. There is no evidence quantifying the current level of industrial flows, or the potential volume of any growth. And, at least as to Southaven, Mayor Musselwhite testified that he does not anticipate much industrial growth in the future.

Without more, the Court cannot find that it is necessary or equitable to temporarily or permanently enjoin new wastewater connections in or industrial flows from the District.

E. Time Needed for the District to Disconnect from the City

First, the Court finds the testimony of both Bradley Davis and Tim Verner to be credible. After reviewing their respective expert reports and listening to the testimony of each, however, the Court finds Tim Verner's opinion to be more credible. Mr. Verner's expert report included a discussion as to each phase of the process, including key issues that the District may face and time estimates for each phase. Mr. Verner's report also included exhibits with examples of potential timelines, listing specific tasks, estimated duration, and start and finish dates for various phases of the process. In comparison, Mr. Davis's expert report provided only his opinion on the total time and did not discuss individual phases or how his consideration of each phase impacted his final opinion on the overall timeline. Mr. Davis's testimony at trial also did not fully explain his consideration of the time necessary for each phase in formulating his overall opinion. Finally, Tim

²² Evidence in the record indicates that, on average, the Maxson Plant treats approximately 18-20 million gallons a day less than its permitted capacity. It is understandable that the City would not "give away a plant's entire capacity," (ECF No. 135 at PageID 1695), but it is unclear how much excess capacity the City believes it needs at the Maxson or Stiles Plants, or how much excess capacity is standard for wastewater treatment plants.

Verner has more recent experience on a plant expansion involving discharge limits closer to those needed for the expansion of the Johnson Creek WWTF. For these reasons, the Court finds Tim Verner's opinion to be the more credible of the two.

In Mr. Verner's opinion, it would take the District 8-10 years at a minimum to complete construction of an alternative treatment facility and disconnect from the City's wastewater system, but it could take up to 13 years if there is a permit challenge. So, which of these time periods is most appropriate and equitable? After considerable deliberation, the Court finds that eight (8) years, measured from October 1, 2023, is the most equitable. Although eight years is the low-end of Mr. Verner's opinion on the needed time, the end of the eight-year period, October 1, 2031, is over 13.5 years after Robert Knecht's March 18, 2018, letter.

Therefore, on or before December 29, 2023, the District shall file on the docket its estimated construction schedule based on this time period. Thereafter, until the District disconnects from the City's system, the District shall file reports every six months²³ that include detailed descriptions and explanations of: (1) its progress toward meeting the deadlines set forth in its construction schedule, and (2) any issues or circumstances that have caused delays, including the impact on the construction schedule.

In addition, on or before December 29, 2023, the District shall file a construction schedule for the remaining work needed to complete its peak flow storage facility. Thereafter, until the peak flow storage facility begins operating, the District shall file reports every six months that include detailed descriptions and explanations of: (1) its progress toward meeting the deadlines set

²³ The Court anticipates that these reports would be filed approximately June 30th and December 30th each year, and if that day is a Saturday, Sunday, or other day on which the Clerk's office for the Western District of Tennessee is closed, then the report would be filed on the next day the Clerk's office is open that is not a Saturday, Sunday, or legal holiday. *See* Fed. R. Civ. P. 6.

forth in its construction schedule, and (2) any issues or circumstances that have caused delays, including the impact on the anticipated schedule.

F. The District's Volumetric Rate until Disconnection

First, the Court finds credible the three witnesses who testified about sewer rates, Gary D. Shambaugh, Richard Michelfelder, and W. Terry Mitchell. However, as the Shambaugh & Michelfelder Final Report and Dr. Michelfelder testified, the addition of a risk premium rate has not been applied to municipal utility rates, except in states where a municipality or city is regulated by the state utility commission or another governing body, the only example of which Dr. Michelfelder could provide, was Pennsylvania. The Court also did not find Terry Mitchell's testimony about the projected rate using real flows of \$0.88 per 1,000 gallons to be credible because he did not consider the amount of projected costs for 2025 that Mr. Shambaugh and Dr. Michelfelder also reduced when making the calculation for municipal rates.

In addition to the evidence presented at trial, the Court also considers Tennessee law on municipal sewer systems and rates. Tennessee Code Annotated § 7-35-414(a) provides as follows:

(a) The governing body of any city or town acquiring and operating a waterworks or sewerage system under this part has the power, and it is the governing body's duty, by ordinance, to establish and maintain just and equitable rates and charges for the use of and the service rendered by the waterworks or sewerage system, to be paid by the beneficiary of the service. The rates and charges shall be adjusted so as to provide funds sufficient to pay all reasonable expenses of operation, repair, and maintenance, provide for a sinking fund for payment of principal and interest of bonds when due, and maintain an adequate depreciation account, and the rates and charges may be readjusted as necessary from time to time by amendment to the ordinance establishing the rates then in force. Any upward adjustment of rates and charges for sewage services shall not be granted solely on the basis of increases of rates and charges for water services, but shall be made only after a finding by the governing body that such an adjustment is reasonable and justified; provided, that this restriction on any upward adjustment of rates and charges for water services shall not apply to counties with a metropolitan form of government. A copy of the schedule of the rates and charges so established shall be kept on file in the office of the board having charge of the operation of such works, and also in the office of the city or town clerk, and shall be open to inspection by all interested parties.

Tenn. Code Ann. § 7-35-414(a) (emphasis added).²⁴

The Memphis City Council has established, by ordinance, a volumetric charge for “all customers” of \$3.32 per 1,000 gallons of flow. *See* Code of Ordinances, City of Memphis, Tennessee, Sec. 13-28-1. The City’s ordinance further provides that the sewer charge is

applicable *to every person* inside and outside the corporate limits of the city whose sewage or wastewater empties into the city’s sewage system for eventual disposal through the sewage system and sewage or wastewater treatment plants. The city may enter into appropriate agreement with the county and all other municipalities in the county or elsewhere using the city’s sewage system for the disposal of their sewage or wastewater, which agreements shall provide for the implementation of the charges herein and the billing and collection thereof.

See Code of Ordinances, City of Memphis, Tennessee (“Memphis Municipal Code”), § 13-28-1 (emphasis added).

Tennessee law requires the City’s elected governing body, the City Council, to establish and maintain by ordinance, “just and equitable rates and charges” for the use of its sewer system.

²⁴ Although not relevant to this order, the Court also notes that Tennessee Code Annotated § 7-35-416 provides as follows:

Any city or town operating a waterworks or sewerage system under this part is authorized and empowered to contract with one (1) or more other cities or towns or with corporations, firms, or individuals to furnish service by such works, and to collect charges for the service, and such other cities, towns, corporations, firms and individuals are authorized to enter into such contracts for such service, but only to the extent of the capacity of the works, without impairing the usefulness of the works to the owners. Cities or towns entering into contracts with owners of waterworks or sewerage systems under this part are authorized to establish, charge, and adjust by ordinance, rates and charges for the service rendered by such system or systems. Revenues derived from this source shall be used to meet the obligations of the contract. The income received by the owner of the works under any such contract shall be deemed to be a part of the revenues of the works, and shall be applied only as provided in this part for the application of such revenues.

This statute, not cited by either party at summary judgment, appears to grant the City authority to enter contracts regarding services by its sewer system without regard to any time limitation. (*See* ECF No. 110 at PageID 1205.) It also predates the 1975 and 1983 Agreements.

The City Council has done so and set a rate of \$3.32 per 1,000 gallons for all customers without distinction for the customer's use (retail or wholesale) or location. There are some customers, however, that do not pay the \$3.32 per 1,000 gallons rate for various reasons. Nevertheless, the Court gives considerable weight and deference to the City Council's determination.

Considering the entire record in this matter, the Court finds that the equities weigh in favor of a graduated rate structure under which the District will pay the volumetric rate set by the Memphis City Council for all customers (the "Ordinance Rate"²⁵) beginning July 1, 2031.²⁶ Under this graduated rate structure, the District's rate will increase each year by an escalating percentage of the difference ("Applicable Percentage") between the Ordinance Rate and the rate as currently calculated under the Agreements ("Agreements Rate") in accordance with the following formula:

$$\text{District's Rate} = \text{Agreements Rate} + ((\text{Ordinance Rate} - \text{Agreements Rate}) \times \text{Applicable Percentage}).$$

Put differently, the District's rate will increase each successive year by adding to its rate as calculated under the Agreements an amount that is equal to the Applicable Percentage multiplied by the difference between the rate set by the City Council and the rate as calculated under the Agreements. The "Applicable Percentage" will increase each year according to the following schedule:

²⁵ This rate is currently set forth in Memphis Municipal Code § 13-28-1, available at https://library.municode.com/tn/memphis/codes/code_of_ordinances (last visited Sept. 22, 2023), archived at <https://perma.cc/GDE5-ZRQH>.

²⁶ The Court uses July 1 because it is the beginning of the City's fiscal year, and the parties appear to have set rates previously based on the City's fiscal year. (See Exhibit 11.)

Start	End	Applicable Percentage
September 23, 2023	June 30, 2024	0%
July 1, 2024	June 30, 2025	5%
July 1, 2025	June 30, 2026	10%
July 1, 2026	June 30, 2027	15%
July 1, 2027	June 30, 2028	20%
July 1, 2028	June 30, 2029	40%
July 1, 2029	June 30, 2030	60%
July 1, 2030	June 30, 2031	80%
July 1, 2031	June 30, 2032	100%

Clear as mud? To hopefully provide some clarity, the Court gives the following example: Using the current rates of \$0.96 and \$3.32, the District's rate beginning on July 1, 2024, would be $\$0.96 + ((\$3.32 - \$0.96) \times 5\%) = \1.08 . And again, using the current rates, examples of what the gradually increasing rates would be are set forth in the following table:

Start	End	Applicable Percentage	Agreements Rate	Ordinance Rate	Difference Between Rates	Final Rate
September 23, 2023	June 30, 2024	0%	\$0.96	\$3.32	\$2.36	\$0.96
July 1, 2024	June 30, 2025	5%	\$0.96	\$3.32	\$2.36	\$1.08
July 1, 2025	June 30, 2026	10%	\$0.96	\$3.32	\$2.36	\$1.20
July 1, 2026	June 30, 2027	15%	\$0.96	\$3.32	\$2.36	\$1.31
July 1, 2027	June 30, 2028	20%	\$0.96	\$3.32	\$2.36	\$1.43

July 1, 2028	June 30, 2029	40%	\$0.96	\$3.32	\$2.36	\$1.90
July 1, 2029	June 30, 2030	60%	\$0.96	\$3.32	\$2.36	\$2.38
July 1, 2030	June 30, 2031	80%	\$0.96	\$3.32	\$2.36	\$2.85
July 1, 2031	June 30, 2032	100%	\$0.96	\$3.32	\$2.36	\$3.32

The above examples are not meant, and the Court is not finding, that the \$0.96 and \$3.32 rates are to be used each year going forward; the above table is merely an example of the calculations using current rates. Each year, the parties shall calculate the District's rate in accordance with the formula the parties have used under the Agreements and use the volumetric charge the City Council has set by ordinance for all customers. Any increases in the volumetric charge set by ordinance for all customers by the City Council must be effective on or before April 1st of each year for the increased rate to be used in calculating the District's rate.

The above rate structure is set, in part, based on the Court's conclusion regarding the length of time the District needs to construct an alternative treatment plant. The Court does not, however, anticipate adjusting the schedule for delays that the District may encounter that are beyond its control. Although the District may not be able to avoid such delays, those delays are also beyond the City's control; the rate structure is intended to allocate the risk of delay between the parties in an equitable manner. It is based on the equities in this matter, including that the District financed a portion of the Horn Lake Interceptor in Tennessee, which it will be unable to use after disconnecting from the City's system. Finally, the Court chose to use gradual rate increases

because doing so is consistent with the City's recent practice²⁷ and the recommendations in the expert report from Mr. Shambaugh and Dr. Michelfelder.²⁸

Beginning October 1, 2033, until the District disconnects from the City's wastewater system, the District shall pay to the City the *greater* of the (1) volumetric rate set by the Memphis City Council for all customers (Ordinance Rate), or (2) the applicable sewer rate then in effect and charged by the DeSoto County Regional Utility Authority (DCRUA).

G. Other Miscellaneous Relief

Finally, the City's proposed findings of fact and conclusions of law make an entirely new request: order the District to pay the City's sewer development fees for all new developments within the District's service area that will discharge to the City's sanitary sewer system. (ECF No. 147 at PageID 2509.) Unfortunately, this is the first mention of the sewer development fee. There is nothing in the record related to this fee. Thus, this request is procedurally improper, and the issue has been forfeited; or, alternatively, there is insufficient evidence in the record to support this as an equitable measure of relief.

²⁷ Robert Knecht testified that the City gradually increased its rate from \$2.87 to \$3.32 "over several years" due to "political and . . . affordability concerns." (ECF No. 141 at PageID 2310.)

²⁸ In its conclusion, the Shambaugh & Michelfelder Final Report notes that, "[a]ttempts to exactly meet the cost of service indications in one rate adjustment can impose large and undue burdens on individual customer groups. Rather than impose large changes in one step, most rate analysts favor a process of gradually bringing revenue generation in line with cost of service indications so as to avoid or ameliorate undue or abrupt changes in rate structure." (Exhibit 19 at p.14, COM-014897.)

CONCLUSION

For the reasons set forth above, unless or until an agreement is otherwise reached by the parties, the Court **ORDERS** and **DECLARES** as follows:

1. The City of Memphis shall continue treating the wastewater from the Horn Lake Creek Basin Interceptor Sewer District of DeSoto County, Mississippi until such time as the District is able to complete all necessary construction to begin operations and route wastewater to an alternative treatment facility.

2. The District shall have eight (8) years from October 1, 2023, in which to complete construction or expansion of an alternative wastewater treatment facility. On or before December 29, 2023, the District shall file on the docket its estimated construction schedule based on this time period. Thereafter, until the District disconnects from the City's system, the District shall file reports every six months²⁹ that include detailed descriptions and explanations of: (1) its progress toward meeting the deadlines set forth in its construction schedule, and (2) any issues or circumstances that have caused delays, including the impact on the construction schedule.

3. On or before December 29, 2023, the District shall file a construction schedule for the remaining work needed to complete its peak flow storage facility. Thereafter, until the peak flow storage facility begins operating, the District shall file reports every six months that include detailed descriptions and explanations of: (1) its progress toward meeting the deadlines set forth in its construction schedule, and (2) any issues or circumstances that have caused delays, including the impact on the anticipated schedule.

²⁹ The Court anticipates that these reports would be filed approximately June 30th and December 30th each year, and if that day is a Saturday, Sunday, or other day on which the Clerk's office for the Western District of Tennessee is closed, then the report would be filed on the next day the Clerk's office is open that is not a Saturday, Sunday, or legal holiday. *See* Fed. R. Civ. P. 6.

4. Until the District disconnects from the City's system, it shall pay to the City a volumetric rate for treatment of its wastewater as set forth below:

Beginning September 23, 2023, the District's volumetric rate shall be calculated using the following formula: District's Rate = Agreements Rate + ((Ordinance Rate – Agreements Rate) x Applicable Percentage).³⁰ The "Applicable Percentage" will increase each year according to the following schedule:

Start	End	Applicable Percentage
September 23, 2023	June 30, 2024	0%
July 1, 2024	June 30, 2025	5%
July 1, 2025	June 30, 2026	10%
July 1, 2026	June 30, 2027	15%
July 1, 2027	June 30, 2028	20%
July 1, 2028	June 30, 2029	40%
July 1, 2029	June 30, 2030	60%
July 1, 2030	June 30, 2031	80%
July 1, 2031	June 30, 2032	100%

Beginning October 1, 2033, until the District disconnects from the City's wastewater system, the District shall pay to the City the greater of the (1) volumetric rate set by the Memphis City Council for all customers (Ordinance Rate), or (2) the applicable sewer rate then in effect and charged by the DeSoto County Regional Utility Authority (DCRUA).

³⁰ All terms in the formula are defined previously in this Order.

5. To the extent any specific relief requested by the parties is not addressed herein, it is **DENIED**.

6. This Court shall retain jurisdiction to allow for the periodic reporting set forth herein and to modify the judgment should a change in circumstances so require.

IT IS SO ORDERED, this 22nd day of September, 2023.

s/ Mark S. Norris

MARK S. NORRIS

UNITED STATES DISTRICT JUDGE